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AN ANALYSIS OF SIXTH GRADERS' ABILITY TO SPELL UNSTUDIED WORDS

A Thesis

Presented to

the Faculty of the School of Education

Boston University

In Partial Fulfillment

of the Requirements for the Degree

Master of Education

---

by

Frances B. Shumway

1949

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CHAPTER I

INTRODUCTION

Statement of the Problem

Summary of Previous Research

CHAPTER I

INTRODUCTION

Statement of the Problem

The subject of this thesis is an analysis of the sixth grade child's ability to spell unstudied words; and of the extent to which the unstudied words that he spells correctly are those of which he knows the meanings. That is to say, are they the words which, in one way or another, have been brought strongly enough to the child's attention so that they have become part of his working vocabulary?

It is a well recognized fact that children learn to spell many words which they have not been taught in a formal spelling lesson. Scallan[1] comments on the increased tendency of educators in recent years to realize that children learn not only those things for which a learning activity is primarily arranged, but many other things as well during the course of the activity.

In considering certain aspects of the teaching of spelling in connection with written composition, Horn writes:[2]

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[1]Ruth Anna Scallan, "The Incidental Learning of Spelling through Reading," (unpublished Master's thesis, Boston University School of Education, Boston, 1947), p. 1.

[2]Ernest Horn, "The Incidental Teaching of Spelling," The Elementary English Review, 14:5&21, January, 1937.

In spite of the limitations that have been pointed out, a considerable amount of spelling is learned incidental to the writing that students do outside the spelling period. Investigations have shown also that much is learned from reading. Those who use any one of the several series of spelling books that recommend the test - study method of teaching find that, in the test given before the study, many of the words are spelled correctly by practically all of the children. Indeed, some children spell all of the words correctly on this pre-test.

Guiles[1] calls attention to the prevalence of such terms as 'incidental learning,' 'functional learning,' 'learning through use,' and others which suggest that some of our learning probably does take place aside from the definite periods reserved for a special type of training.

Little has been done in the way of studying word meaning ability as it affects spelling ability. Peake[2], however, discusses an experiment which was conducted in an attempt to answer the following questions:

1. What is the relation between ability in spelling and ability in reading of pupils of grades IV - VIII as measured by scores on the Stanford Achievement Test?

2. Is the correlation relatively uniform throughout the five grades tested?

3. What is the coefficient of correlation for the group as a whole?

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[1]R. E. Guiles, "Effect of Formal Spelling on Spelling Accuracy," The Journal of Educational Research, 37:284, December 1943.

[2]Nellie L. Peake, "Relation between Spelling Ability and Reading Ability," The Journal of Experimental Education, 9:192, December, 1940.

Among the conclusions reached was the one that, "There is a tendency for high scores in spelling to accompany high scores in word meaning."[1]

The present analysis will attempt to answer the following questions in relation to the sixth grader's ability to spell unstudied words:

1. What percentage of words ordinarily reserved for the seventh grade can the statistical sixth grade child spell correctly?
2. What is the affect of the sixth grader's knowledge of the meanings of these words on his ability to spell them?

The results of an experiment which proposed to answer these two questions will be tabulated in the following categories: 1) Spelling correct and meaning correct; 2) spelling correct and meaning incorrect; 3) spelling incorrect and meaning correct; 4) spelling incorrect and meaning incorrect. An attempt will be made to analyze the words of highest frequency (the top ten per cent) in each category.

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[1]Peake, op. cit., p. 193.

Research Pertinent to This Analysis

The fact that a child can spell an untaught and unstudied word correctly indicates one of two things; either he has learned the word through the incidental learning mentioned above or the word is a phonetic one and the child is a reasonably good speller. If a child knows the meaning of a word ordinarily not taught until the following year, it shows that he has had enough incidental contact with the word so that it has become part of his store of knowledge. Therefore, all research on the incidental learning of spelling and on the knowledge of word meanings as if affects spelling ability is pertinent to this analysis.

The writer will attempt to analyze the words of highest frequency in each of the four categories in which the results of the experiment, which was conducted for this analysis, are tabulated. It follows that any research on the difficulties inherent in the words themselves is, also, pertinent.

The incidental learning of spelling. McKee[1], writing in 1934, discussed the findings of Dr. J. M. Rice, who, working in 1894, measured the efficiency of school systems all over the country. From his extensive investigation of spelling, Dr. Rice drew some startling conclusions. He found that pupils who studied spelling forty minutes a day could

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[1]Paul McKee, Language in the Elementary School (Boston: Houghton Mifflin Company, 1934), p. 24.

spell no better than children who spent only ten minutes a day on spelling. He decided that drill work in the direct teaching of spelling was futile.

Following closely upon the work of Dr. Rice, McKee tells us, Dr. O. P. Cornman, then superintendent of schools in Philadelphia, studied the efficiency of spelling instruction. He came to the conclusion that there was nothing particular to be gained by direct drill work in spelling and that incidental teaching of the subject was just as efficient as a direct method.

Saying that we now know that the conclusions drawn by Rice and Cornman were not valid, McKee tells us, however, that it is probable that their work had much influence upon the spelling program in the schools. He goes on to say:

> At least from a subject considered of value by school people and laymen, spelling dwindled to insignificance during the period of 1900 - 1910. At first it was given less time in the daily program. Later the idea of incidental learning of spelling came into prominence, and was adopted somewhat generally . . . When taught, it (spelling) was taught incidentally in connection with writing, composition, reading, and other subjects. This in all probability meant the lack of a definite word list to be taught and a definite time in the program for the teaching of spelling as spelling.
>
> Beginning about 1910 and continuing up to the present time there has been an extended period of research in the teaching of spelling . . . This emphasis on research has undoubtedly created a new view of the importance of the subject and has returned it to prominence as a separate subject in the elementary school curriculum.[1]

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[1] Ibid., p. 25.

McKee warns us, however, that this demand for a direct attack upon spelling does not mean that children do not learn to spell important words incidentally outside the period set aside for spelling.[1]

In conclusion, he continues:

> In the light of all available data, it is the judgment of the writer that in order to secure superior results spelling must be attacked directly as spelling, the child's attention must be directed at the importance of correct spelling in all writing, and a functional course of study in written composition must be in operation to insure incidental learning opportunities of a desirable type.[2]

It has long been recognized that we learn by connecting new facts with those that we already know. Thorndike[3] says, "Learning is connecting, and man is the great learner primarily because he forms so many connections."

Enlarging upon this sentence, he continues:

> The bonds (or connections) lead not only from external situations - facts outside the man - to responses in him, and from situations in him to acts by which he changes outside nature, but also from one condition or fact or event in him to another, and so on in a long series. Of the connections to be studied in man's learning, an enormous majority begin and end with some state of affairs within the man's own brain - are bonds between one mental fact and another.

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[1] Ibid., p. 79.

[2] Ibid., p. 80.

[3] Edward L. Thorndike, The Psychology of Learning, Volume II (New York: Teachers College, Columbia University, 1913, pp. 54-55.

In discussing these connections or bonds as they effect the learning of spelling, Gates,[1] in 1922, commented on the great complexity of neural connections and bodily mechanisms which must be integrated in order to spell even as simple a word as 'cat.' He felt that children could not be expected to learn functions as complex as reading and spelling without instruction, and that it was just as useless to try to devise adequate methods of instruction without real knowledge of the constituents of these functions and the influence of various factors upon them.

In 1930, Thompson[2] continued the study of the spelling controversy by analyzing the spelling instruction in a public school situation where a professionally minded school principal had attempted to apply methods based on widely accepted research findings. Following are the implications which he drew from this study:

1. The low average efficiency and the wide variability of improvement among words indicate that the school is actually practicing many pupils in habits of inaccurate spelling.

2. Present day spelling lists contain too many easy words.

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[1]Arthur I. Gates, The Psychology of Reading and Spelling, with Special Reference to Disability, Contributions to Education, No. 129 (New York: Teachers College, Columbia University, 1922), p. 106.

[2]Robert S. Thompson, "The Effectiveness of Modern Spelling Instruction," Teachers College Record, 32:284-285, December, 1930.

3. The results cast doubt on the practicability of attempting to teach each word in the spelling lists separately and specifically.

4. There is some evidence to support the view that spelling might well be left to incidental learning; this incidental learning to be supplemented in indicated cases by remedial treatment.

Gilbert[1] wondered if incidental learning accounted for the improvement in spelling during high school and college years since no systematic instruction in spelling is given then. He experimented with three hundred eighty men and women students at junior, senior, and graduate university levels to try to answer several questions, including:

> Does reading for the purpose of being able to answer questions on the context result in any improvement in spelling for words encountered in the selection?

Fifty difficult words were first given to a trial group of one hundred forty-eight students. From the results, the twenty most difficult words were found. These were matched approximately for difficulty into two sets of ten words each.

In describing the experiment, Gilbert wrote:

> The general plan was to pre-test the students on both sets, present a reading selection in which were embedded the words of only one set, then post-test on both sets to compare the learning that had taken place.

That part of Gilbert's summary which is pertinent to this study follows:

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[1]Luther C. Gilbert, "A Study of the Effect of Reading on Spelling," The Journal of Educational Research, 28:570, April, 1935.

> The findings of this experiment indicate clearly that college students improve their spelling through reading even when attention is not directed toward that end. No doubt the amount of gain is influenced by the type of reading and by the purpose of the reader; proof of this hypothesis constitutes an inviting objective for further study.
>
> The pick-up thru reading for words recently brought to the individual's attention is probably greater than the pick-up for words encountered more remotely. But even for words which have not recently been brought to mind, the amount of learning (of spelling) through reading is highly significant.[1]

Two years after Gilbert's work, Ernest Horn[2] wrote of the earlier investigations into the incidental learning of spelling conducted at the University Elementary School of the State University of Iowa. It was these investigations which led to the adoption by many school systems of the test-study method. Horn felt that since incidental learning was known to exist to varying degrees, it was logical to demand that before a child studied a list of words, he should be tested, in order to learn which words, if any, he had already learned incidentally. Such a test would allow pupils to begin studying where incidental learning left off. A pupil who had learned all the words incidentally would not need to study any of them. If he knew all but one word, he would need to study only that one. Horn found that the test-study plan adjusted

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[1] Ibid., p. 576.

[2] Horn, op. cit., p. 21.

the teaching of spelling to the individual needs of the students; made full use of incidental learning; and helped to motivate the study of spelling.

Closely following Horn's study, Breed[1] made a summary of studies relating to the teaching of spelling which had been published during the period from July 1, 1934, to June 30, 1937. Speaking of the efficacy of the test-study method, he reported that, in measuring spelling achievement in one hundred thirty-five rural schools, those using that method surpassed the schools using the study-test method.

That same year, Ashbaugh[2] discussed what he called "an unsolved problem in spelling." He admitted that there was evidence that the frequency with which pupils had encountered a given word aside from the necessity of learning to spell it decreased the necessary effort expended when the word appeared in a spelling lesson.

In 1939, Tyler[3] made a study of spelling as a secondary learning in relation to the acquisition of certain unusual words which occurred in the field of social studies in the

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[1]Frederick Breed, "Spelling," The Review of Educational Research, 7:519 & 521, December, 1937.

[2]E. J. Ashbaugh, "An Unsolved Problem in Spelling," The Elementary English Review, 14:17 & 24, January, 1937.

[3]I. Keith Tyler, Spelling as a Secondary Learning, Contributions to Education, No. 781 (New York: Teachers College, Columbia University, 1939), p. 108.

sixth grade in the two counties investigated. Those of Tyler's conclusions which have a bearing on the present analysis are listed below:

1. A unified treatment of social studies in the sixth grade involving wide reading and a great variety of learning activities results in a larger amount of secondary learning of spelling words than does a more traditional type of textbook teaching of history and geography. This was found true in each of the experimental groups when it was compared with the control group.

2. The study suggests that individual spelling vocabularies are acquired from pursuit of various activities relating to specialized fields.

3. The wide range among the pupils in gains made in learning to spell the new words indicates that the techniques of learning to spell new words were acquired to varying degrees by the pupils. It bolsters up the contention of other investigators in the field of spelling that such techniques of learning to spell need to be taught to children. The fact that the gains have relatively low correlations with intelligence suggests that the acquiring of these techniques has been largely an individual matter and that it is responsible for the gains rather than intelligence or reading ability.

6. This study confirms other studies comparing more modern methods with traditional methods of organizing and teaching in that it is the pupils of greater ability who seem to gain most from these more progressive methods. The fact, however, that even the students of lesser ability gained somewhat more under experimental conditions than in the control group suggests the value of a varied program even for these children. This is important because, in a skill usually considered a matter of drill, the freer conditions seemed better even for children of low ability.[1]

---

[1] Ibid., pp. 110-111.

Two years after Tyler's work, the Lees[1] described a plan for the improvement of spelling which was carried out by the teachers in the public schools of Beloit, Wisconsin. Since a child who can spell the two thousand eight hundred words most commonly used by adults has mastered about 97.2 per cent of all the running words necessary for doing the various types of adult writing analyzed, it was decided to cut out about half the words ordinarily taught from the first to the eighth grade. A constant check on all words misspelled by each pupil in written work seemed to stand a much better chance of taking care of individual needs than did learning an extra two thousand words, most of which he would probably never use.

Furthermore, the teachers of Beloit had repeatedly found in giving pre-tests in spelling that there were some children who knew how to spell almost all the words for their grade without having studied them. Since they had learned these words incidentally, most of the time spent on spelling drill would be wasted for such children. Many teachers had thought that the answer was more and harder words. The Beloit teachers decided, however, that it was better to give these children less rather than more work in spelling because they

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[1]Dorris May Lee and J. Murray Lee, "The Spelling Load Is Too Heavy," Twentieth Yearbook of the National Elementary Principal, 20:484-486, July, 1941.

would continue to acquire words far ahead of any study plan. These pupils were given a test on the new words once a week or as often as necessary and provision was made for practice on any words missed on their written work. Thus, time was made available for enrichment through various types of word study.

Continuing their description of the Beloit experiment, the Lees said that the teachers made certain by every means at their disposal that the words taught were the common, basic ones used in everyday writing. When the words had been selected, they were apportioned by grades. Since the third grade was chosen as the place for special emphasis on spelling, the Lees discussed fully the results obtained there. In the third grade, the greatest number of new words which any child had to learn was twelve instead of the twenty which had previously been taught. The words were easier than formerly; many of them were taken from what had been the second grade list, and many which had previously been taught in the third grade were advanced to higher levels. The new list conformed much more closely to the words actually used by the children in their own compositions. It was felt that this arrangment would make spelling easier for the poor speller and improve all his written work.

Using this plan which took advantage of incidental learning and which taught essential rather than unnecessary words, the teachers in Beloit reached the following conclu-

sions:

> The spelling words were more easily learned; the pupils achieved new success; and success changed their attitude from dislike and hopelessness to liking and confidence, which in turn made success even surer.[1]

Working with a group of elementary school teachers in 1943, Guiles[2] continued the study of the incidental learning of spelling. Their plan was to compare spelling accuracy on a list of studied words with that on a carefully equated parallel list which had never been studied during a special period set aside for spelling instruction. The children tested were in grades four, five, and six in Superior, Wisconsin. Each group was tested on seventy-five studied and seventy-five unstudied words.

Guiles came to the conclusion that incidental learning of spelling did take place. Although he found that the words which had been studied were spelled with a higher degree of accuracy than those which had not, the difference was never greater than five per cent. This was less than one-fifth the growth that took place in two years without formal spelling periods. Guiles felt that they had shown that a special period spent on the study of a basic word list had only a

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[1] Ibid., p. 487.

[2] R. E. Guiles, "Effect of Formal Spelling on Spelling Accuracy," The Journal of Educational Research, 37:284 & 286, December, 1943.

limited affect on spelling accuracy.[1]

Three years later, Linehan[2] summarized the research of spelling methods. Her first two conclusions were:

1. Incidental learning of spelling through other subjects does take place.

2. The test-study method has some value.

In 1947, Scallan[3] studied the incidental learning of spelling through four methods of presenting words in a reading lesson: 1) meaning of critical words explained in the context; 2) critical words explained in a glossary; 3) critical words presented by word analysis; 4) critical words presented orally with the meaning explained.

Following are those of Scallan's conclusions which have a bearing upon the present analysis:

2. The results revealed that children spell words with a higher per cent of accuracy if they have been encountered in reading than if they have not previously seen them.

7. All methods of presenting the vocabulary produced statistically significant amounts of incidental learning of spelling. The results showed definitely that the word analysis method of presenting the vocabulary accounted for the greatest amount.[4]

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[1] Ibid., p. 289.

[2] Barbara Eleanor Linehan, "A Summary of Research of Spelling Methods." (unpublished Master's thesis, Boston University School of Education, Boston, 1946), p. 62.

[3] Ruth Anna Scallan, "The Incidental Learning of Spelling through Reading," (unpublished Master's thesis, Boston University School of Education, Boston, 1947), p. 2.

[4] Ibid., pp. 51-53.

Keyser[1] carried Scallan's study a step further by comparing the amount of correct spelling immediately after reading with spelling the same words after a two weeks' period of delay. She, also, wished to present evidence concerning the transfer of learning from reading to spelling as it is affected by mental age, high and low reading achievement, high and low spelling achievement, and sex differences.

Spelling words of junior and senior high school level were embedded in eight stories each of which was written in two versions; one version included a set of ten spelling words and the other ten synonyms for them. A total of eighty words and eighty synonyms was used and daily spelling tests of ten seen words and ten unseen synonyms were built. Two weeks later the words were tested again in four tests of forty words each. Also, tests of comprehension, reading achievement, spelling achievement, intelligence, handwriting, visual and auditory perception were given.

Keyser tested three hundred thirty-two pupils in eight fourth and eight fifth grades, dividing them into four groups, each of which was sub-divided into two sections. The two versions of each story and the four types of word presentation

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[1]Margaret Lee Keyser, "The Incidental Learning of Spelling through Four types of Word Presentation in Reading," (unpublished Doctor's dissertation, Boston University School of Education, Boston, 1948), pp. 2 & 3.

for each lesson were rotated among the eight population groups.[1]

The fact that Keyser found that there was incidental learning of spelling, for each of the types of word presentation in reading (when spelling is tested immediately after reading), has significance for the present study. She showed, also, that there was not a statistically significant amount of retention for the four methods combined when spelling was tested after a two weeks' delay.[2]

Relationship between spelling ability and the knowledge of word meanings. In discussing the test-study method of teaching spelling, Pryor and Pittman[3] spoke of its obvious advantages: that it takes advantage of incidental learning and then frees child to go on to other work; that it permits the teacher to devote the spelling period to those children who need help most. They warned, however, that this method took it for granted that children already knew the meaning and had a mastery of the use in speech of the words they were able to spell correctly. They went on to say that this was an erroneous supposition, since, though some children would know, many would not.

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[1]Ibid., pp. 114 & 115.

[2]Ibid., pp. 115 & 117.

[3]Hugh Clark Pryor and Marvin Summers Pittman, A Guide to the Teaching of Spelling (New York: The Macmillan Company, 1925), p. 41.

It is useless for children to know how to spell a lot of words which hold no meaning for them. It was a wise person who said, "A large vocabulary is greatly to be desire; the accurate, simple, and forceful use of words is more desirable still."[1]

Durrell[2] stressed the importance of a meaningful vocabulary when he said that lack of it might contribute to pupils' failure to retain words. He felt that, usually, the enriched-meaning technique should come before other types of word exercises.

LaBrant[3] made a plea for enriched vocabularies when he stated that there was no short cut to vocabulary growth. He continued:

> Vocabulary is as wide as the experience of the individual and as limited as that experience. . . We cannot foresee all these (vocabulary) needs. There are seven hundred fifty thousand words in English. We can encourage the use of what the student knows, deepen his understanding of the possibilities in a word (poetry is ideal for this), open his eyes to the simple ways for learning new words (context, and, this failing, the dictionary, encyclopedia, history, science book, or other reference), and teach him to respect the words he speaks and writes. The drive to lift his vocabulary will then be his own.

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[1]"Recognition and Usage Vocabularies," Editorial, The Elementary English Review, 11:147, May, 1934.

[2]Donald D. Durrell, Improvement of Basic Reading Abilities (Yonkers: World Book Company, 194), p. 164.

[3]Lou LaBrant, "The Words They Know," The English Journal, 33:480, November, 1944.

Despite the widely recognized importance of familiarity with word meanings, much remains to be done in the way of developing worthwhile word meaning exercises. Crosscup said, "Generally speaking, research on ways of promoting vocabulary growth has been very limited in the scope of the premises which it has investigated."[1]

Furthermore, the writer finds few investigations into the affect of vocabulary grow on spelling ability and, yet, knowledge of word meanings is a dull tool without the ability to spell the words. Hollingworth[2] called attention to the interesting fact that spell comes from an old Anglo-Saxon word which meant to tell or to convey meaning. She went on to say that, though children can spell correctly many words which they cannot define or use and vice versa, knowledge of word meaning was probably an important factor in spelling. She tested this experimentally using a group of fifteen children of average ability in most school subjects who were deficient in spelling.

A list of thirty words was dictated to these children with instructions to spell each word and then underneath it

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[1]Richard B. Crosscup, "A Survey and Analysis of Methods and Techniques for Fostering Growth of Meaning Vocabulary," (unpublished Master's thesis, Boston University School of Education, Boston, 1940), p. 280.

[2]Leta S. Hollingworth, The Psychology of Special Disability in Spelling, Contributions to Education, No. 88 (New York: Teachers College, Columbia University, 1918), p. 57.

to use the word in a sentence to show whether they knew what it meant. The result was verified by repeating the test a month later using a different set of words. The words were chosen at random from available lists. Hollingworth's group was too small to make her findings of great significance. On the basis of her data, however, she found that children would produce about sixty-six and two-thirds per cent more misspelled words when they were ignorant or uncertain of the meanings than they would produce in writing words the meanings of which they knew.[1]

Eighteen years after Hollingworth's experiment, Acomb[2] made a study of the psychological factors in reading and spelling. According to his data, spelling ability proved itself to be highly related to reading ability. This finding would seem to indicate that it is, also, related to ability in word meaning.

A year later, Russell[3], writing of the characteristics of good and poor spellers, felt that the reading period should be devoted to reading for pleasure and information and that

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[1] Ibid., pp. 53-57.

[2] Allan Acomb, "A Study of the Psychological Factors in Reading and Spelling," (unpublished Master's thesis, Boston University School of Education, Boston, 1936), p. 89.

[3] David H. Russell, Characteristics of Good and Poor Spellers, Contributions to Education, No. 727 (New York: Teachers College, Columbia University, 1937), pp. 86 & 87.

word study should be stressed during the spelling period. He listed a considerable meaning vocabulary as a probable asset of good spellers.

In 1940, Peake[1] analyzed the relation between spelling ability and reading ability, attempting to answer the following questions:

1. What is the relation between ability in spelling and ability in reading of pupils of grade four to eight as measured by scores on the Stanford Achievement Test?

2. Is the correlation relatively uniform throughout the five grades tested?

3. What is the coefficient of correlation for the group as a whole?

Among her conclusions Peake stated that there was a tendency for high scores in spelling to accompany high scores in word meaning.[2] It may be noted here that in Peake's analysis the words used in the spelling test were not the same as those used to test the knowledge of word meanings.

The next year, Millar[3] described an experiment carried on at Madison, Wisconsin, in which three kinds of tests were

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[1]Nellie L. Peake, "Relation between Spelling Ability and Reading Ability," The Journal of Experimental Education, 9:192, December, 1940.

[2]Ibid., p. 193.

[3]Janet M. Millar, "The Improvement of Spelling as a Tool in Written Expression," Twentieth Yearbook of the National Elementary Principal, 20:496, July, 1941.

given. In the first test which was called 'Pupils' Own Stories,' the children in grades three through six where asked to write a short composition upon any subject which interested them. Spelling was not stressed, but the teachers told the children to spell as best they could without help. The second test, 'Pupils' Own Vocabularies,' was built upon an idea carried out elsewhere. The children were given papers upon which were twenty-five key words from the social studies of the preceding grade. Following each word were four blanks where the children were asked to write words suggested to them by the key word. Again no special mention was made of spelling so that the children would write the words they thought of whether or not they were sure of the spelling. The third test was a fifty-word spelling review based upon the regular spelling list of the previous grade. Millar noted that the lists of words compiled from 'Pupils' Own Vocabularies' showed a wide range of vocabulary. She found that:

> There was at least a suggestion that the words used by the child in expressing his own thoughts tend to be spelled with greater accuracy than words he does not voluntarily use.[1]

By 1946, Russell[2] was ready to investigate his thought,

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[1] Ibid., p. 497.

[2] David H. Russell, "Spelling Ability in Relation to Reading and Vocabulary Achievements," The Elementary English Review, 23:32 & 35, January, 1946.

mentioned above, that a large meaning vocabulary was a probable asset of good spellers. It was his aim to: 1) study some relationships between spelling ability, reading abilities, and meaning vocabulary; 2) give a few clues to possible causes of poor and good spelling; and 3) suggest a few considerations in determining the grade placement of words in spelling lists and text-books. Russell's investigation implied that spelling ability is one of a constellation of language arts abilities which tend to reinforce one another from the first grade at least through the sixth grade level. His study also indicated that word recognition and vocabulary abilities were more closely related to spelling ability than to the level of comprehension in reading. He concluded:

> However, the correlations are so high between spelling ability and all these factors, it seems probable that definite improvement in any one of them may affect spelling ability favorably.

That same year, Linehan[1] made a summary of research of spelling methods. In checking the studies of the knowledge of word meanings as it affects spelling ability, she found that authorities were not in agreement. In the last fifteen years, however, there had been only favorable comments. Linehan found special exercises built to train and test children on the meanings of words. These had been recently introduced into

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[1]Barbara Eleanor Linehan, "A Summary of Research of Spelling Methods," (unpublished Master's thesis, Boston University School of Education, Boston, 1946), pp. 20 & 21.

obvious even to the uninitiated that there are many stumbling blocks on the way to the correct spelling of a large number of English words. Homonyms, double letters, non-phonetic syllables, long words, and diphthongs are some of the difficulties which come immediately to mind.

Gates[1] listed spelling difficulties in three thousand eight hundred seventy-six words. He gave the common difficulties in the case of each word. He found that, "In the case of many words, there is a conspicuous type of misspelling and a strong tendency for difficulty to appear in one or two parts of the word."

From Gates' study it is, also, evident that a great many of the misspellings are of one or two types. He made no attempt, however, to catalogue the various kinds of words or syllables which caused the difficulties.

Ashbaugh[2], in an article published the same year as Gates' study, revealed that he had found no experimental work which showed distinct factors such as length, double letters, diphthongs, etc., as occurring exclusively in words which had required a large amount of time or effort in learning. He went on to say:

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[1] Ibid., p. 110.

[2] E. J. Ashbaugh, "An Unsolved Problem in Spelling," The Elementary English Review, 14:24, January, 1937.

> It is conceivable that words vary in learning difficulty for children of different age levels, intelligence levels, - perhaps for sex and social backgrounds. It would seem that learning difficulty, were it known, should be a factor in grade allotment of words, in teacher assignment, in time allotment to subject. Perhaps the relation between learning difficulty and retention is positive, perhaps negative. At present we do not know.
>
> It would seem, therefore, that a large amount of very carefully controlled experimentation needs to be done on this problem of difficulty of learning. Utmost care will be necessary to avoid confusing difficulty which is the resultant of special disability on the part of students with difficulties inherent in the words as a learning situation. Unquestionably the problem will challenge the greatest ingenuity and the most skillful effort of the research worker who finds the answer. The need seems obvious. It is hoped that many will attack the problem since therein lies the hope that someone will find the answer.

In spite of Ashbaugh's appeal which was made twelve years ago, the writer has found no evidence of anybody's attempting to follow his suggestion though many studies have been made concerning the difficulties which arise as the result of special disabilities on the part of the students.

Conclusions. It is evident from the research on the subject that incidental learning of spelling does take place. Keyser's[1] study showed that, though there was incidental learning of spelling through four different methods of presenting words in a reading lesson, the amount of retention was not statistically significant when spelling was tested after a two weeks' delay. This indicates that the statistical child

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[1]Keyser, op. cit., p. 117.

must have repeated contacts with a word, in reading or writing, before he will form the bonds necessary to be able to spell it correctly.

Those studies which have been made during the last fifteen years to determine the relation between word meaning ability and spelling ability have shown that the correlation between the two is high. This finding seems to substantiate the indications of the incidental learning of spelling. In learning the meaning of a word, the child has had sufficient contact with that word to have given the incidental learning of spelling a chance to have taken place. In many of the analyses, however, the words used in the spelling test were not the same as those used to test the knowledge of word meanings. In these cases, the tendency for high scores in spelling to accompany high scores in word meaning lends weight to Russell's[1] theory that the various language arts abilities tend to reinforce one another.

Although there is much evidence concerning spelling difficulties which arise as the result of special disabilities on the part of the pupils, little experimentation has been done on the problem of revealing distinct factors inherent in the words which cause difficulty.

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[1]Russell, op. cit., p. 35.

CHAPTER II

THE EXPERIMENT

CHAPTER II

THE EXPERIMENT

Purpose. The problem of this analysis is to learn to what extent the sixth grader is able to spell unstudied words and whether or not those unstudied words which he spells correctly are those to which he attaches the correct meaning. That is to say, are the correctly spelled, unstudied words those with which the child has had sufficient contact so that they have become part of his store of workable knowledge?

This study will present data gathered from an experiment which was conducted in an attempt to answer the following questions:

1. What percentage of words ordinarily reserved for the seventh grade can the statistical sixth grade child spell correctly?
2. What is the affect of the sixth grader's knowledge of the meanings of these words on his ability to spell them?

The results of the experiment will be tabulated in the following categories: 1) spelling correct and meaning correct; 2) spelling correct and meaning incorrect; 3) spelling incorrect and meaning correct; 4) spelling incorrect and meaning incorrect. The writer will try to analyze the words of highest frequency (the top ten per cent) in each category.

Construction of the tests. The town where the experiment for this analysis was conducted uses The Morrison Speller,[1] by J. Cayce Morrison, as the source of seventh grade spelling words. The total load of seventh grade words has thirty-two lists, twenty words to a list. In order to keep the experiment from becoming unduly long and yet to test spelling ability all through the year's range from supposedly easier to more difficult words, the writer used every other list. Thus, spelling ability was tested on three hundred twenty unstudied words.

A sentence was written for each spelling word using the word in the sense judged, by the writer, to be most commonly known to sixth graders. Care was taken not to let any sentence give the meaning of the word and not to use other words beyond the sixth grade level in the sentences.

A word meaning test was built for each of the sixteen lists of twenty spelling words. Varney[2] had conducted an experiment in which she evaluated various techniques for measuring the knowledge of word meanings in the fourth, fifth, and sixth grades. She had found that the matching technique

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[1] J. Cayce Morrison, The Morrison Speller (Syracuse: Iroquois Publishing Company, 1946 edition).

[2] Elinor Caroline Varney, "An Experiment to Evaluate Some Techniques for Measuring Knowledge of Word Meanings in the Fourth, Fifth, and Sixth Grades," (unpublished Master's thesis, Boston University School of Education, Boston, 1945), p. 58.

showed the clearest item validity with the multiple choice technique second. The writer used the matching technique for this experiment.

The twenty words for each meaning test were divided into four groups of five words. On each test paper, the four lists of words were printed down the left side of the paper. Opposite each list of words, was a group of numbered word meanings which went with it. Theses meanings were taken or adapted from Webster's Elementary Dictionary.[1] In each list of meanings, the order was mixed and there were two extra meanings.

The spelling tests, with the accompanying sentences, and the word meaning tests, with the explanation which was read to the pupils, will be found in the appendix.

Conduct of the experiment. The experiment for this analysis was conducted in the two sixth grades in the elementary schools in Lynnfield, Massachusetts, a residental and farming community twelve miles north of Boston. There was a total of fifty-two pupils in the two grades. Shortly before the tests for this experiment were started, these pupils had been given the Stanford Achievement Test, Intermediate Battery,

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[1]Webster's Elementary Dictionary (New York: American Book Company, 1941).

Complete, Form E.[1] At that time, the grade placement for these children was 6.2. The following table gives the results of the achievement tests for spelling and word meaning:

[1]Truman L. Kelley, Giles M. Ruch, and Lewis M. Terman, Stanford Achievement Test (Yonkers: World Book Company, 1940).

TABLE I

RESULTS OF STANFORD ACHIEVEMENT TEST FOR SPELLING AND WORD MEANING

(Based on Total Standardization Population)

	Measures of Central Tendency	
	Spelling	Word Meaning
Mean	50.94	55.19
Median	51.15	55.4
	Measures of Variability	
	Spelling	Word Meaning
Range	40	42
Standard Deviation	8.403	10.311
Quartile Deviation	5.952	8.045
	Grade Equivalent Based on the Mean	
	Spelling	Word Meaning
	5.7+	6.5

From the above table, it will be seen that, though the statistical child of the group tested was in the second month of the sixth grade, his spelling ability, based on total standardization population, was only that of a child in the seventh month of the fifth grade. On the same basis, however, his word meaning ability was that of a child in the fifth month of the sixth grade. The wide range in both spelling and word meaning ability for the group lends significance to the results of the tests for this experiment.

The first spelling test for this analysis was given on the fourth of January, 1949. It was followed one week later by the corresponding word meaning test and the second spelling test. Thus, the testing covered a period of seventeen school weeks. Tests using eighth grade words had been tried the previous month. The percentage of misspellings on these was so heavy that the teachers were unhappy and it was decided to change to seventh grade words.

The regular classroom teachers gave all the tests. In giving the spelling tests, they pronounced each word distinctly; then read the sentence using the word; and, finally, repeated the word. This was done to give each child every possible chance to hear the words correctly.

Even though care was taken not to let the sentences, used in dictating the spelling words, give the meanings of the words, it was thought best to allow a week's time to elapse be-

fore giving the corresponding word meaning test. Had the spelling and word meaning tests been given the same day, there was a possibility that some children might get clues to the meanings by remembering the sentences.

The following explanation of the word meaning tests was read to the children:

> You will each be given a word meaning test paper. Printed down the left hand side of the paper, you will find four lists of words. Opposite them are four lists of numbered word meanings. The words and meanings which go together are printed together. In each list, the order of the meanings is mixed and there are two extra meanings. Try to find the correct meaning for each word and write the number of that meaning on the line in front of the word. The first one is done for you.
>
> In the case of any word which has several meanings, we have tried to use the meaning most commonly known to young people. The purpose of this test is to see if you know the meanings of the words which you spelled correctly last week.

The results of the tests were tabulated under the following headings: 1) spelling correct and meaning correct; 2) spelling correct and meaning incorrect; 3) spelling incorrect and meaning correct; 4) spelling incorrect and meaning incorrect. Therefore, it was necessary to have both a spelling test and a word meaning test on any list of twenty words in order to tabulate results for a child on that particular list. Word meaning tests which various children missed through absence were made up when the children returned to school. It did not seem fair, however, to ask the teachers to re-dictate all the spelling words which had been missed. Absences

cut the possible fifty-two pairs of testings each week down to an approximate average of forty-three and one-half.

CHAPTER III

ANALYSIS OF THE DATA

ings and the percentage of testings which fell in each of the four categories:

TABLE II

TOTAL RESULTS OF SPELLING AND WORD MEANING TESTS

13,900 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
Number of Testings	5313	1353	4748	2486
Percentage of Testings	38.22+%	9.73+%	34.15+%	17.88+%

An examination of the table above will answer the questions which were set as a goal for this experiment.

<u>Spelling Correct</u>

6666 testings

47.95+%

<u>Meaning Correct</u>

10,061 testings

72.38+%

<u>Spelling Incorrect</u>

7234 testings

52.04+%

<u>Meaning Incorrect</u>

3839 testings

27.61+%

For the group of below average sixth grade spellers tested in this experiment, the statistical child:

1. Spelled correctly 47.95+ per cent of the words which he would study as spelling in the seventh grade.
2. Knew the meanings of 79.70+ per cent of the words which he could spell.
3. Knew both the correct spelling and the correct meaning for words which represented 38.22+ per cent of all the words tested.
4. Could spell 52.80+ per cent of the words of which he knew the meanings.
5. Could spell 35.24+ per cent of the words of which he did not know the meanings.
6. Knew the meanings of 65.63+ per cent of the words which he spelled incorrectly.
7. Knew the meanings of 24.33 per cent more of the words than he could spell correctly.
8. Knew the meaning of 14.07 per cent more of the words spelled correctly than of the words spelled incorrectly.
9. Knew the spelling of 17.56 per cent more of the words of which the meaning was known than of those of which the meaning was unknown.

The findings listed above tell us the statistical sixth grade child can already spell almost one-half of the words

which would usually be given him as spelling lessons in the seventh grade. They, also, are a definite indication that the knowledge of word meanings is a positive factor in his ability to spell unstudied words. They seem to say, too, that he picks up the meanings of words more readily through incidental contact than he does the ability to spell the words.

There are many other factors which may affect a child's ability to spell words which he has not studied. These include any special diability on the part of the child himself and the spelling difficulties which may be inherent in the words. Since little experimentation has been done on the problem of the relative difficulty involved in learning to spell various words, the writer wished to try to analyze the words which were responsible for the top ten per cent of the testings in each of the categories in which the results of this experiment were tabulated. In doing this, difficulties which seemed to be the result of special disabilities on the part of the pupils were ignored and attention was concentrated on the problems which the words themselves presented as a spelling situation.

Words of Highest Frequency in

Spelling Correct - Meaning Correct Category

some one 37	olives 33	village 37
election 33	dislike 33	upset 37
barked 35	contest 32	listed 35

(continued on next page)

carload 35	railway 35	mount 33
glance 32	desert 36	highway 34

The words listed above are in the order in which they happened to come on the tests. The numbers after the words indicate the number of pairs of testings which fell in the spelling correct - meaning correct column for these words. Thirty-two to thirty-seven people out of an approximate forty-three to forty-four had both spelling and meaning correct for these words. With the exception of election, they all have only one or two syllables and they are words with which we would expect eleven and twelve-year-olds to have had many incidental contacts.

Homonyms, double letters, non-phonetic syllables, long words, and diphtongs are factors which come to mind as possible causes of difficulty in the spelling of unstudied words. The list of words above contains no homonyms and, with one exception, no long words to cause difficulty.

Village contains the only double letter. The pupils in the group tested, however, have been exposed to village ever since they read Friendly Village in the first grade. The youngsters in the Lynnfield Center end of the town live in a village and often hear it spoken of as such.

The list contains several non-phonetic syllables, notably some, the second syllable in olives, and the first syllable in highway.

The only word which could possibly be called long is election and it has only eight letters to cause trouble. The fact that the final syllable of this word did not have more misspellings must be due to the frequency with which it is met in other words. That it is spelled tion and not shun is a fact which has to be learned.

Carload, railway, and mount contain diphthongs which are possible sources of difficulty.

Though glance would be called a phonetic word, it can easily be misspelled with the substitution of an s for the c. Desert can readily be misspelled by doubling the s and confusing it with the familiar word which means the last course at dinner.

This leaves only five of the top ten per cent of the words in the spelling correct - meaning correct column which offer no special spelling difficulties. These words are barked, dislike, contest, upset, and listed. Apparently, the considerable amount of incidental contact which the children had had with the other words in the list was enough to offset the inherent spelling difficulties.

Words of Highest Frequency in

Spelling Correct - Meaning Incorrect Category

render 20	prospect 20
rendered 23	obliged 19

(continued on next page)

item 27 former 19

nevertheless 23

Nineteen to twenty-seven pupils out of an approximate forty-three to forty-four could spell each of these words even though they did not know the meanings. These are the words which the children could most readily spell even though they had not had enough incidental contact to make them part of their working vocabulary. It is interesting to note that they are all straight phonetic words, offering no special inherent spelling problems. Even the twelve letter word, nevertheless, is simple, since it is made up of three common little words.

Words of Highest Frequency in
Spelling Incorrect - Meaning Correct Category

nonsense 36	volunteer 37	illustrating 31
acquaint 38	merchandise 35	mosquito 35
acquainted 32	elsewhere 34	millionaire 39
behavior 31	scholar 32	stomach 34

Thirty-one to thirty-nine children out of an approximate forty-three to forty-four knew the meanings of these words but could not spell them. Though these are words which we would expect a sixth grader to have heard frequently enough to have made him familiar with their meanings, they are not words which he would necessarily have met often in his reading or

writing. Many of them are undoubtedly part of the statistical sixth grade child's speaking vocabulary.

Below is a list of the conspicuous difficulties which are apparently inherent in the words of highest frequency in the spelling incorrect - meaning correct column. The data is taken only from those papers on which the testings on these words fell in this category. The number after each word indicates the number of pupils for whom the paired testings on the word fell in this column. The letter or letters which caused difficulty are underlined. Only difficulties which brought trouble to five or more pupils are listed.

Spelling difficulties inherent in:

1. nonsense 36

   (1). sen<u>se</u> - 34 errors.

   (2). <u>s</u>ense - 6 errors.

2. acquaint 38

   (1). a<u>c</u> - 31 errors.

   (2). <u>qu</u> - 17 errors.

   (3). <u>ain</u> - 16 errors.

3. acquainted 32

   See above.

4. behavior 31

   (1). <u>io</u>r - 31 errors.

5. volunteer 37

   (1). <u>un</u>- 37 errors.

(2). teer - 22 errors.

(3). vol - 16 errors.

6. merchandise 35

(1). chan - 21 errors.

(2). dise - 15 errors.

(3). mer - 8 errors.

7. elsewhere 34

(1). wh - 19 errors.

(2). else - 17 errors (often reversed).

(3). ere - 9 errors.

8. scholar 32

(1). sch - 26 errors.

(2). ol - 12 errors (strong tendency to double).

(3). ar - 9 errors.

(4). ol - 6 errors (tendency to double).

9. illustrating 31

(1). us - 21 errors.

(2). ill - 19 errors.

(3). ill - 11 errors.

(4). tra - 6 errors (often ai).

10. mosquito 35

(1). qu 23 errors.

(2). qui - 17 errors.

(3). mos - 8 errors.

(4). to - 6 errors (tendency to add e).

11. millionaire 39

(1). aire - 22 errors (omitted).

(2). aire - 18 errors.

(3). ion - 10 errors.

12. stomach 34

(1). ach - 21 errors.

(2). ach - 11 errors.

(3). stom - 7 errors.

Words of Highest Frequency in

Spelling Incorrect - Meaning Incorrect Category

rural 23	faculty 24	tact 22
perceive 34	oppose 22	literature 23
duly 27	moral 22	virtue 23
commerce 26	grizzly 25	

Neither the spelling nor the meaning of these words was known to twenty-three to thirty-four pupils out of an approximate forty-three to forty-four. There are several abstract words on the list. The others are not the simple, straightforward kind which most sixth graders know. They associate rural with the U. S. Mail and grizzly with a bear without knowing the exact meaning of either.

Below is a list of the most noticeable difficulties which are inherent in the words of highest frequency in the

spelling incorrect - meaning incorrect column. Only errors which were made by five or more people are listed. The number after each word indicates the number of pupils for whom the paired testings on the word fell in this category. The letter or letters which caused difficulty are underlined.

Spelling difficulties inherent in:

1. rural 23

   No conspicuous spelling difficulties inherent in this word. Some pupils made no attempt to spell it; others made it unrecognizable except for initial and final letters.

2. perceive 34

   (1). c<u>ei</u>ve - 8 errors.

   (2). <u>c</u>eive - 6 errors.

   (3). cei<u>ve</u> - 5 errors (<u>d</u> substituted in each case).

3. duly 27

   (1). d<u>u</u> - 9 errors.

4. commerce 26

   (1). mer<u>ce</u> - 15 errors.

   (2). mm - 8 errors.

5. faculty 24

   (1). <u>ul</u> - 19 errors.

   (2). t<u>y</u> - 15 errors.

   (3). f<u>ac</u> - 8 errors.

6. oppose 22

(1). pp - 11 errors.

(2). op - 9 errors.

7. moral 22

(1). al - 15 errors.

(2). r - 5 errors (doubled).

8. grizzly 25

(1). zz - 12 errors.

(2). ly - 6 errors.

Note: There was an interesting tendency to add a before the ly, spelling it the way many children pronounce it.

9. tact 22

(1). Confused with tacked of which the pronunciation is nearly identical - 10 errors.

(2). ct - 9 errors.

(3). ct - 5 errors.

10. literature 23

(1). a - 15 errors.

(2). er - 9 errors.

(3). ture - 9 errors.

(4). ture - 6 errors.

(5). lit - 5 errors (doubled).

11. virtue 23

(1). vir - 18 errors.

11. virtue 23 (continued)

(2). tue - 13 errors.

(3). tue - 8 errors.

It is often a moot question whether a spelling error is caused by a difficulty inherent in a word or by some disability on the part of the child. Of the errors noted in the two lists above, several may be caused by the fact that the child mispronounces the word. Some of the vowels which were conspicuous causes of error, such as the u in volunteer, the a in merchandise, and the u in illustrating, are in syllables which all of us tend to slide over quickly. Nineteen people left the h out of elsewhere though most of the nineteen spelled everywhere correctly in the same lesson. It is possible that, no matter how carefully the teacher pronounces an unstudied word, the child may remember an incorrect pronunciation of his own and spell the word according to that.

In the case of omitted syllables, it is hard to say whether the omission is caused by a spelling difficulty or by a hearing or memory disability on the part of the child. When an unfamiliar word is incorrectly spelled, part of the trouble may be caused by the fact that perhaps the child does not remember it perfectly long enough to solve the spelling probelms involved in writing it.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Suggestions for Further Study

CHAPTER IV

SUMMARY AND CONCLUSIONS

Purpose. The purpose of this analysis was to learn to what extent the sixth grader was able to spell unstudied words and whether or not those unstudied words which he spelled correctly were those to which he attached the correct meaning. That is to say, were the correctly spelled, unstudied words those with which the child had had sufficient contact to make them part of his store of useful knowledge?

This study presented data gathered from an experiment which was conducted in an attempt to answer the following questions:

1. What percentage of words ordinarily reserved for the seventh grade can the statistical sixth grade child spell correctly?
2. What is the affect of the sixth grader's knowledge of the meanings of these words on his ability to spell them?

The results of an experiment which proposed to answer these two questions were tabulated in the following categories: 1) spelling correct and meaning correct; 2) spelling correct and meaning incorrect; 3) spelling incorrect and meaning correct; 4) spelling incorrect and meaning incorrect. An attempt was made to analyze the spelling difficulties inherent in the

words of highest frequency (the top ten per cent) in each category.

Resumé of the experiment. The experiment for this analysis was conducted in the two sixth grades in Lynnfield, Massachusetts. There was a total of fifty-two pupils in the two grades, but absences cut to approximately forty-three to forty-four the average number for whom we had both a spelling and a word meaning test.

Six hundred forty spelling words, in lists of twenty, are usually taught in the seventh grade in this town. The writer used every other list of seventh grade words to test the sixth graders' ability to spell unstudied words, making a total of three hundred twenty words tested. A sentence was written for each word using it in the sense judged to be most commonly known to sixth graders. These sentences were read when the spelling words were dictated. Care was taken not to let the sentences give the meanings of the words. A word meaning test, using the matching technique, was built for each of the sixteen lists of spelling words.

Shortly before the tests for this experiment were given, the pupils had taken a Stanford Achievement Test. At that time, their grade placement was 6.2. Their grade equivalent based on the mean was 5.7 in spelling and 6.5 in word meaning. There was a wide range in both spelling and word meaning ability for the group, lending significance to the results

of this experiment.

Once the experiment was started, on January 4, 1949, one spelling and one word meaning test were given each week. The regular classroom teachers gave all the tests. In the spelling tests, they pronounced each word distinctly; read the sentence using the word; and repeated the word. A week's time was allowed to elapse between the giving of a spelling test and the corresponding word meaning test so that no children would get clues to the meanings by remembering the sentences.

The results of the pairs of tests were tabulated from week to week in the following categories: 1) spelling correct and meaning correct; 2) spelling correct and meaning incorrect; 3) spelling incorrect and meaning correct; 4) spelling incorrect and meaning incorrect.

In considering the data collected in this experiment, the writer attempted to analyze the words which were responsible for the top ten per cent of the testings in each of the categories mentioned above. In doing this, difficulties which seemed to be the result of special diabilities on the part of the pupils were ignored and attention was concentrated on the problems which the words themselves presented as a spelling situation.

Conclusions. From an analysis of the data collected in this experiment, the following conclusions can be drawn:

1. The statistical sixth grade pupil, for the group

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tested, was able to spell correctly nearly fifty per cent of the words taught as spelling in the seventh grade in his school system.

2. The knowledge of word meanings was a positive factor in his ability to spell unstudied words.
3. There was an indication, too, that he picked up the meanings of words more readily through incidental contact than he did the ability to spell the words.
4. The untaught words which the majority of the children spelled correctly were either familiar ones or they were straight phonetic words which offered no special inherent spelling problems.
5. In considering spelling hard spots inherent in the words which were responsible for the top ten per cent of the testings in the spelling incorrect - meaning correct and the spelling incorrect - meaning incorrect columns, the following difficulties, listed in order of frequency, were found to be the most conspicuous causes of error, each causing twenty or more mistakes:

    (1). Vowels in syllables which we all tend to slide over quickly.

    (2). Double letters or sounds (as cq in acquaint).

    (3). Silent letters.

    (4). Qu.

(5). Se as the final sound.

(6). I used like y.

(7). Ch with the sound of k.

6. Mispronunciation on the part of the child was apparently another considerable cause of spelling error.
7. If the test - study method of teaching spelling is to be used for any pupils, it would seem important to include word meaning tests and pronunciation exercises.

Suggestions for Further Study

1. Research still needs to be done on the words being taught as spelling lessons. Are they the words which the children will use in their other studies?

2. Further study could be made of the spelling errors on the papers in this experiment. An interesting comparison could be made between the errors caused by special disability on the part of the children and those caused by difficulties inherent in the words as a spelling situation.

3. It would seem worthwhile to study the child's pronunciation of unstudied words. This might be done with recordings. It would then be possible to see if his mispronunciation still determines error even after he has heard the teacher pronounce the word correctly.

4. The large percentage of unstudied words which the statistical child, for the group tested for this analysis, spelled correctly seems to be an argument in favor of the test - study method. An interesting experiment could be made to determine whether or not the one practice in misspelling which the poor speller gets on a test - study test actually makes it more diffcult for him to learn to spell new words.

5. Research could be done on the difficulty which a child has in remembering unfamiliar words. Does this prevent him from keeping the word in mind long enough to try to solve the spelling problems involved in writing it?

BIBLIOGRAPHY

BIBLIOGRAPHY

Acomb, Allan, "A Study of the Psychological Factors in Read-Reading and Spelling." Unpublished Master's thesis, Boston University School of Education, Boston, 1936. 89 pp.

Ashbaugh, E. J., "An Unsolved Problem in Spelling," The Elementary English Review, 14:17 and 24, January, 1937.

Breed, Frederick, "Spelling," The Review of Educational Research, 7:519-25, December, 1937.

Butler, Huldah Anne, "Finding Word Meaning from Context in Grades Five and Six." Unpublished Master's thesis, Boston University School of Education, Boston, 1943. 96 pp.

Carter, Bernadetta R., "The Construction of Tests of Visual Perception, Auditory Discrimination and Kinaesthetic Factors to Be Used in Diagnosing Inadequate Performance in Spelling." Unpublished Master's thesis, Boston University School of Education, Boston, 1941. 71 pp.

Crosscup, Richard B., "A Survey and Analysis of Methods and Techniques for Fostering Growth of Meaning Vocabulary." Unpublished Master's thesis, Boston University School of Education, Boston, 1940. 299 pp.

Durrell, Donald D., Improvement of Basic Reading Abilities. Yonkers: World Book Company, 1940. 407 pp.

Elivian, Jeannette, "Word Perception and Word Meaning in Silent Reading in the Intermediate Grades." Unpublished Master thesis, Boston University School of Education, Boston, 1938. 55 pp.

Gates, Arthur I., A List of Spelling Difficulties in 3876 Words. New York: Bureau of Publications, Teachers College, Columbia University, 1937. 166 pp.

———, The Psychology of Reading and Spelling with Special Reference to Disability, Contributions to Education, No. 129. New York: Teachers College, Columbia University, 1922. 108 pp.

Gilbert, Luther C., "A Study of the Effect of Reading on Spelling," The Journal of Educational Research, 28:570-76, April, 1935.

Guiles, R. E., "Effect of Formal Spelling on Spelling Accuracy," The Journal of Educational Research, 37:284-89, December, 1943.

Hill, Barbara, "The Persistence of Perceptual Functions Related to Reading and Spelling." Unpublished Master's thesis, Boston University School of Education, Boston, 1943. 96 pp.

Hollingworth, Leta S., The Psychology of Special Disability in Spelling, Contributions to Education, No. 88. New York: Teachers College, Columbia University, 1918. 105 pp.

Horn, Ernest, "The Incidental Teaching of Spelling," The Elementary English Review, 14:3-5 and 21, January, 1937.

Keyser, Margaret Lee, "The Incidental Learning of Spelling through Four Types of Word Presentation in Reading." Unpublished Doctor's dissertation, Boston University School of Education, Boston, 1948. 123 pp.

LaBrant, Lou, "The Words They Know," The English Journal, 33:475-80, November, 1944.

Lee, Dorris May, and J. Murray Lee, "The Spelling Load Is Too Heavy," Twentieth Yearbook of the National Elementary Principal, 20:484-88, July, 1941.

Linehan, Barbara Eleanor, "A Summary of Research of Spelling Methods." Unpublished Master's thesis, Boston University School of Education, Boston, 1946. 68 pp.

McKee, Paul, Language in the Elementary School. Boston: Houghton Mifflin Company, 1934. 482 pp.

Millar, Janet M., "The Improvement of Spelling as a Tool in Written Expression," Twentieth Yearbook of the National Elementary Principal, 20:496-502, July, 1941.

Morrison, J. Cayce, The Morrison Speller, Syracuse: Iroquois Publishing Company, 1946 edition.

Nichols, Augusta Matilda, "The Construction and Use of a Group Test for the Analysis of Spelling Difficulties." Unpublished Doctor's dissertation, Boston University School of Education, Boston, 1947. 220 pp.

Peake, Nellie L., "Relation between Spelling Ability and Reading Ability," The Journal of Experimental Education, 9:192-93, December, 1940.

Pryor, Hugh Clark, and Marvin Summers Pittman, A Guide to the Teaching of Spelling. New York: The Macmillan Company, 1925. 141 pp.

"Recognition and Usage Vocabularies," Editorial, The Elementary English Review, 11:147, May, 1934.

Russell, David H., Characteristics of Good and Poor Spellers, Contributions to Education, No. 727. New York: Teachers College, Columbia University, 1937. 103 pp.

———, "Spelling Ability in Relation to Reading and Vocabulary Achievements," The Elementary English Review, 23:32-37, January, 1946.

Scallan, Ruth Anna, "The Incidental Learning of Spelling through Reading." Unpublished Master's thesis, Boston University School of Education, Boston, 1947. 90 pp.

Spache, George, "Characteristics of Good and Poor Spellers," The Journal of Educational Research, 40:182-89, November, 1940.

Thompson, Robert S., "The Effectiveness of Modern Spelling Instruction," Teachers College Record, 32:284-86, December, 1930.

Thorndike, Edward L., The Psychology of Learning. 2 vols.; New York: Teachers College, Columbia University, 1913.

Tyler, I. Keith, Spelling as a Secondary Learning, Contributions to Education, No. 781. New York: Teachers College, Columbia University, 1939. 116 pp.

Varney, Elinor Caroline, "An Experiment to Evaluate Some Techniques for Measuring the Knowledge of Word Meanings in the Fourth, Fifth, and Sixth Grades." Unpublished Master's thesis, Boston University School of Education, Boston, 1945. 65 pp.

Webster's Elementary Dictionary. New York: American Book Company, 1941.

APPENDIX

SPELLING EXPERIMENT

Explanation of Word Meaning Tests (to Be Read to the Pupils)

You will each be given a word meaning test paper. Printed down the left side of the paper, you will find four lists of words. Opposite them are four lists of word meanings. The words and meanings which go together are printed together. In each list, the order of the meanings is mixed and there are two extra meanings. Try to find the correct meaning for each word and write the number of that meaning on the line in front of the word.

In the case of any word which has several meanings, we have tried to use the meaning most commonly known to young people. The purpose of this test is to see if you know the meanings of the words which you spelled correctly last week.

SPELLING EXPERIMENT

Words for First Week

1. dealer. He was a dealer in hardware.
2. dealing. Is he dealing fairly with his customers?
3. render. The store will render you a bill at the end of the month.
4. rendered.
5. coax. Let's try to coax her to come.
6. loan. Will you loan me a pencil?
7. adjust. He needs to adjust the straps on his roller skates.
8. adjusted.
9. extent. What is the extent of you land?
10. extended.
11. decide. We hope you will decide to go.
12. event. The first event will be a relay race.
13. timber. Large logs are called timber.
14. wound. The doctor dressed his wound.
15. simply. Simply turn to the right and you will find it easily.
16. ruin. John's accident will ruin our chances of winning the game.
17. tobacco. Tobacco is raised in the Connecticutt valley.
18. avail. You should avail yourself of this splendid opportunity.
19. utmost. We must do our utmost if we are going to pass this test.
20. latter. I like the latter idea better than the former.

WORD MEANING TEST FOR FIRST WEEK

(1)

___ dealer	1. To ask with pleasing words.
	2. To give or to deliver.
___ render	3. To free from danger.
	4. To fit or to arrange.
___ coax	5. To let a person use for awhile.
	6. A public officer.
___ loan	7. A person who sells things.
___ adjust	

---

(2)

___ rendered	1. The size, length or bulk of a thing.
	2. Pierced.
___ dealing	3. Buying and selling.
	4. Given or delivered.
___ adjusted	5. Fitted or arranged.
	6. To settle a question.
___ extent	7. Width.
___ decide	

---

(3)

___ extended	1. Large pieces of wood for building.
	2. A sport.
___ event	3. Plainly and clearly.
	4. A hurt to the body of a person or animal.
___ timber	5. Twisted.
	6. Any happening, especially one of importance.
___ wound	7. Stretched out or made longer.
___ simply	

---

(4)

___ ruin	1. The second of two things spoken of.
	2. To spoil or to destroy.
___ tobacco	3. Most distant or the greatest possible.
	4. To take away from.
___ avail	5. Most difficult.
	6. Leaves of a plant used for smoking.
___ utmost	7. To be of use or help.
___ latter	

Note: The definitions above were taken or adapted from Webster's Elementary Dictionary.

SPELLING EXPERIMENT

Words for Second Week

1. rural. His mail is delivered by rural free delivery.
2. royal. The royal banner was flying over the palace.
3. sense. He showed good sense in not going on the thin ice.
4. hereby. You are hereby made leader of this patrol.
5. perceive. Do you perceive the difference between these two shells?
6. nonsense. Don't talk nonsense.
7. herein. There are many amusing stories contained herein.
8. persuade. Let's try to persuade Jim to go.
9. trousers. He was wearing corduroy trousers.
10. haste. They ran because they were in haste.
11. herewith. Herewith, we come to the end of the story.
12. surface. He covered the surface of his skis with linseed oil.
13. hinge. This door needs a new hinge.
14. based. His success in baseball is based on his batting ability.
15. style. Style in ladies' clothes changes often.
16. hereafter. Hereafter, we will play basketball on Tuesdays and Thursdays.
17. tennis. Katherine and Ann enjoy playing tennis together.
18. duly. The new girl was duly initiated into the club.
19. portion. John's mother gave us each a large portion of the cake.
20. joint. The elbow is a joint of the arm.

WORD MEANING TEST FOR SECOND WEEK

(1)

___ rural
___ royal
___ sense
___ hereby
___ perceive

1. By this.
2. To see.
3. Bright in color.
4. To run into or through.
5. Feeling or understanding.
6. Having to do with a king.
7. Having to do with the country.

---

(2)

___ nonsense
___ herein
___ persuade
___ trousers
___ haste

1. A change of place.
2. In this.
3. Swiftness or speed.
4. An outer garment which covers each leg separately and extends from waist to ankle or knee.
5. Foolish words or actions.
6. To win over with kind words.
7. To tell in an interesting way.

---

(3)

___ herewith
___ surface
___ hinge
___ based
___ style

1. A jointed piece of metal on which a door, etc., turns or swings.
2. With this.
3. The outside of an object.
4. Now.
5. Put on a base or starting point.
6. The top of any body of water.
7. A way of doing something, especially of dressing.

---

(4)

___ hereafter
___ tennis
___ duly
___ portion
___ joint

1. Any place which is run down.
2. A share or a limited part.
3. At some time.
4. In the correct way.
5. A game played with a ball struck with a racket.
6. A point at which one part is joined to another.
7. After this or in the future.

SPELLING EXPERIMENT

Words for Third Week

1. acquaint. We must acquaint John with the new boy.
2. fortunate. We are fortunate in having a new movie projector for our school.
3. stretched. The balloon was stretched to its limit.
4. delivery. We will make delivery of these saws within the next few days.
5. crotch. Joe was sitting up in the crotch of the old maple munching an apple.
6. acquainted. They have been acquainted for several years.
7. unfortunate. It is unfortunate that he cannot hear well.
8. deliveries. The milk man has many deliveries to make each day.
9. attitude. What is your attitude on the question of the new schoolhouse?
10. gratitude. We expressed our gratitude to him for bringing us home.
11. approach. As you approach our house there is a large red barn on the right.
12. pretend. Let's pretend to be asleep.
13. appeared. He appeared to be in a great hurry.
14. announce. He will announce the exact time of the game later.
15. invoice. They send an invoice with each order of goods.
16. depot. After the big storm the morning train didn't reach the depot until noon.
17. banquet. The P. T. A. often has a banquet at the first meeting.
18. commerce. When commerce is brisk, businessmen are happy.
19. lettuce. Will you please get a head of lettuce, too?
20. register. He is going to register his puppy with the American Kennel Club.

WORD MEANING TEST FOR THIRD WEEK

(1)

___ acquaint
___ fortunate
___ stretch
___ crotch
___ delivery

1. The amount gathered or harvested.
2. The taking of a thing from one place or person to another.
3. To reach out or to make larger.
4. To hold closely.
5. To cause a person to know something or another person.
6. Lucky.
7. Angle formed by two limbs or by a limb and the trunk of a tree.

---

(2)

___ acquainted
___ unfortunate
___ deliveries
___ attitude
___ gratitude

1. Feeling thankful.
2. Unlucky.
3. Comings and goings.
4. The taking of things from places or persons to other places or persons.
5. Natural ability.
6. The position or feeling of a person.
7. To have caused a person to know something or another person.

---

(3)

___ approach
___ pretend
___ appeared
___ announce
___ invoice

1. To make believe.
2. To go forward.
3. Came into sight.
4. To come near.
5. A priced list of goods sent to a buyer.
6. To make known publicly.
7. To give or to send.

---

(4)

___ depot
___ banquet
___ commerce
___ lettuce
___ register

1. A feast.
2. The buying and selling of goods.
3. A person in charge.
4. A cottage or hut.
5. A railroad station.
6. To put on a written record.
7. A leafy plant used as a salad.

SPELLING EXPERIMENT

Words for Fourth Week

1. operate. Do you know how to operate this tractor?
2. whereby. This is the oath whereby we pledge our loyalty to the Girl Scouts of America.
3. custom. It was an Indian custom to bury a fish in each hill of corn.
4. suitable. They wore dungarees and jackets suitable for a tramp in the woods.
5. reliable. John was asked to take charge of the money, because he is reliable.
6. operating. The big steam shovel is operating on the river road this morning.
7. wherever. We will eat lunch wherever we happen to be at one o'clock.
8. customer. Mr. Russell had just opened the store when the first customer arrived.
9. payable. This bill is payable within thirty days.
10. cartoon. He drew a good cartoon for the school paper.
11. operation. He is recovering rapidly from the operation.
12. lawyer. He had a good lawyer to defend him in court.
13. volume. The third volume is a collection of short stories.
14. mind. You can finish easily, if you keep your mind on your work.
15. ware. He sold dishes and kitchen ware of all kinds.
16. some one. Some one will have to take the lead.
17. bundle. The newspapers were tied in bundles waiting for the boys on the truck to pick them up.
18. British. The Americans conquered the ~~British~~ British at Yorktown.
19. respond. When I asked him his name, he did not respond.
20. drawer. You will find your clean socks in your bureau drawer.

WORD MEANING TEST FOR FOURTH WEEK

(1)

___ operate	1.	By which.
___ whereby	2.	Changeable.
___ custom	3.	Habit.
___ suitable	4.	To do work or to keep a machine working.
___ reliable	5.	Style.
	6.	Fit to be trusted.
	7.	Fitting or proper.

---

(2)

___ operating	1.	A person who buys regularly at a particular store.
___ wherever	2.	Ready for the giving of money for goods or services.
___ customer	3.	A large box.
___ payable	4.	Making.
___ cartoon	5.	An amusing or absurd picture.
	6.	In any place in which.
	7.	Working or keeping a machine working.

---

(3)

___ operation	1.	A small, rough mass.
___ lawyer	2.	A person who studies and knows the customs and rules which govern a nation.
___ volume	3.	Something done with instruments to the body of a living person to restore health.
___ mind	4.	Goods.
___ ware	5.	The part of a person which feels, sees, wills, thinks, etc.
	6.	A large amount.
	7.	A book or a quantity.

---

(4)

___ some one	1.	A sliding, boxlike compartment in a table or chest.
___ bundle	2.	A large container.
___ British	3.	Having to do with Great Britain or its people.
___ respond	4.	Somebody.
___ drawer	5.	To make a speech.
	6.	To answer.
	7.	A number of things fastened together in a bunch.

SPELLING EXPERIMENT

Words for Fifth Week

1. alley. James and Henry took a short cut through an alley.
2. trolley. They took a trolley to get to the other side of the city.
3. consent. Will your mother consent to let you go to the picnic?
4. present. He had a new bicycle for a birthday present.
5. locate. They are going to locate the new store on the corner of Main and East streets.
6. located. Where will the new school be located?
7. experience. Swimming in salt water was a new experience for Jane.
8. confidence. We all have confidence in Jim's ability to win the high jump.
9. applicant. He was the first applicant for the job.
10. trial. His trial was for armed robbery.
11. application. His application for the new job has been accepted.
12. ideal. Their new house has an ideal location.
13. quality. Everything in that store is of fine quality.
14. difficult. The fourth problem was a difficult one.
15. umpire. The umpire decided that Jack was out on first base.
16. period. Remember to put a period at the end of the sentence.
17. uniform. The baseball captain has a new uniform.
18. maybe. Maybe we can be ready to go on time, if we hurry.
19. influence. Ann has a good influence on the younger girls.
20. swinging. He was swinging over the pool on the end of a long rope.

WORD MEANING TEST FOR FIFTH WEEK

(1)

___ alley
___ trolley
___ consent
___ present
___ locate

1. The amount paid.
2. A gift.
3. To settle in a certain spot.
4. To unfasten.
5. A narrow passage, especially between buildings in a city or town.
6. An electric car.
7. To agree.

---

(2)

___ located
___ experience
___ confidence
___ applicant
___ trial

1. The hearing and judgment of a case in a law court.
2. A person who applies for something such as work or aid.
3. A helper.
4. Settled in a certain spot.
5. Trust.
6. The actual living through an event.
7. A common saying.

---

(3)

___ application
___ ideal
___ quality
___ difficult
___ umpire

1. Perfect or thought to be perfect.
2. Not seen clearly.
3. A person chosen to rule on the plays of a game.
4. The act of asking for something usually in writing.
5. Real or true nature, often used to show excellence.
6. Reduction in size.
7. Hard to do.

---

(4)

___ period
___ uniform
___ maybe
___ influence
___ swinging

1. Act of getting results without using force.
2. Perhaps.
3. The space between two things.
4. The punctuation point that marks the end of a complete declarative sentence.
5. By some means.
6. Moving in a sweeping curve.
7. A costume of a particular style worn by persons in the same service, etc.

SPELLING EXPERIMENT

Words for Sixth Week

1. election. The election of our class officers will take place next week.
2. objection. Have you any objection to our having a valentine party?
3. actual. He had the actual experience of driving the car himself.
4. annual. The May Breakfast is an annual affair.
5. manual. This manual gives directions for all the experiments.
6. democrat. President Truman is a democrat.
7. democratic. The United States has a democratic form of government.
8. senior. Raymond is a senior at the Wakefield High School.
9. junior. Janet is a junior.
10. behavior. A person's behavior often depends on the kind of breakfast he has eaten.
11. faculty. The faculty arrives at the school before the students.
12. initial. His first initial is H.
13. hospital. She is in the hospital for an operation.
14. foundation. The foundation for the new house is made of cement blocks.
15. thunder. Lightning flashed and thunder rolled in the distance.
16. concern. Jordan Marsh Company is a large concern.
17. barked. The little dog barked as I went up the front walk.
18. carload. Fruit and vegetables are shipped north from Florida by the carload.
19. partner. Howard chose Mary as his partner for the square dance.
20. glance. Will you glance at the muffins while you are in the kitchen?

WORD MEANING TEST FOR SIXTH WEEK

(1)

___ election
___ objection
___ actual
___ annual
___ manual

1. Voting to choose a person for office.
2. A handbook.
3. In a straight line.
4. Real.
5. Taking place once each year.
6. A notebook.
7. A reason or feeling against something.

---

(2)

___ democrat
___ democratic
___ senior
___ junior
___ behavior

1. The next one.
2. Having to do with government by the people.
3. Conduct.
4. Having to do with the next to the last year of the course in high school or college.
5. Belief.
6. A member of the Democratic party.
7. Having to do with the last year of the course in high school or college.

---

(3)

___ faculty
___ initial
___ hospital
___ foundation
___ thunder.

1. A place in which the sick and injured are cared for.
2. The loud noise which followslightning.
3. A kind of floor covering.
4. The teachers in a school or college.
5. The first letter of a word.
6. A home for old people.
7. The support upon which anything rests.

---

(4)

___ concern
___ barked
___ carload
___ partner
___ glance

1. To look pleasantly.
2. The amount usually carried in a freight car.
3. A business organization.
4. Made the short, loud noise uttered by a dog.
5. To give a quick look.
6. Things enclosed in a certain space.
7. Either one of a couple who dance together.

Note: The definitions above weretaken or adapted from Webster's Elementary Dictionary.

SPELLING EXPERIMENT

Words for Seventh Week

1. resign. The president of our club is going to resign, because he is moving away.
2. likewise. His sister, who is secretary of the club, will have to do likewise.
3. otherwise. Otherwise, we would not be able to elect new officers in time to take their places.
4. oppose. William is going to run for president, and I do not think anyone will oppose him.
5. dispose. They are going to dispose of their furniture before moving.
6. resigned. They will have resigned before the next meeting.
7. disposed. All this waste paper must be disposed of before we start a new job.
8. volunteer. Who will volunteer to read his story first?
9. engineer. His uncle is a locomotive engineer.
10. declaration. When you go into Canada, you will have to make a declaration of all the goods in your possession.
11. engineering. When he grows up, he wants to go into some kind of engineering.
12. presume. I presume that he will be elected.
13. prevail. Can we prevail upon you to join us?
14. moral. The moral of that story is to be careful crossing the street.
15. olives. Green olives are often stuffed.
16. handful. He had a handful of peanuts.
17. meadow. The hay in the lower meadow was all cut.
18. odor. The odor of the freshly cut hay was delightful.
19. samples. He left us samples of the different products.
20. conversation. They had a long conversation as they walked home.

WORD MEANING TEST FOR SEVENTH WEEK

(1)

___ resign	1. Willingly.
	2. To suggest.
___ likewise	3. To give for some purpose or to bring to an end.
	4. To put one person or thing against another.
___ otherwise	5. In another way.
	6. In like manner.
___ oppose	7. To give up, as an office.
___ dispose	

---

(2)

___ resigned	1. A man who operates an engine or is skilled in other mechanics.
___ disposed	2. A person who of his own will offers himself for service.
___ volunteer	3. Planned.
	4. A soldier.
___ engineer	5. The act of making known.
	6. Given up, as an office.
___ declaration	7. Given for some purpose or brought to an end.

---

(3)

___ engineering	1. To suppose to be true without proof.
	2. To make believe.
___ presume	3. Small fruits, with stones in center, used both ripe and unripe as a relish.
___ prevail	4. The working of anything.
	5. The inner meaning.
___ moral	6. The science of using natural power in ways useful to man.
___ olives	7. To urge successfully.

---

(4)

___ handful	1. Spoken exchange of ideas.
	2. A heavy hammer.
___ meadow	3. Pieces which show what the whole is like.
	4. An amount which can be held in the hand.
___ odor	5. Land on which grass is grown for hay.
	6. Any smell.
___ samples	7. A swampy field.
___ conversation	

Note: The definitions above were taken or adapted from Webster's Elementary Dictionary.

SPELLING EXPERIMENT

Words for Eighth Week

1. scarce. Snow was scarce in New England in January.
2. scarcely. During a severe winter, the birds scarcely have enough to eat.
3. merchandise. That store carries only first-class merchandise.
4. advertising. The sky writing is advertising Pepsi Cola.
5. elsewhere. You will have to look elsewhere for a coat to fit you.
6. everywhere. We have looked everywhere for the puppy.
7. satisfactory. It will be satisfactory if you can finish the first eight problems.
8. settled. Plymouth was settled in 1620.
9. effect. The new medicine took effect quickly.
10. throughout. Most song birds stay in the south throughout the winter.
11. satisfaction. Their praise showed satisfaction with his work.
12. settlement. Lynnfield was an early settlement in the Massachusetts Bay Colony.
13. happiness. Let's write a note to wish her happiness on her birthday.
14. item. A pair of shoes is a necessary item of clothing.
15. respect. All the boys respect the new scout leader.
16. canary. She has a new cage for her canary.
17. weary. The boys were weary after their long hike.
18. gotten. Got may be used in place of gotten in the past tenses of the verb to get.
19. dislike. Does Henry dislike his job of cleaning the barn?
20. accuse. Do not accuse anyone unless you are sure he has done wrong.

WORD MEANING TEST FOR EIGHTH WEEK

(1)

7 scarce	1. An opinion.
5 scarcely	2. Drawing attention to the good qualities of something one has to sell.
6 merchandise	3. In another place.
2 advertising	4. Before long.
3 elsewhere	5. Rarely or hardly.
	6. Goods used in trade.
	7. Rare or not in large supply.

---

(2)

4 everywhere	1. In every part of or during the whole time of.
3 satisfactory	2. Located in a place to stay.
2 settled	3. Giving what is wanted or expected.
6 effect	4. In every place.
1 throughout	5. Beyond.
	6. Result or outcome.
	7. Growing well.

---

(3)

7 satisfaction	1. A village started by pioneers.
1 settlement	2. One piece or part out of many.
6 happiness	3. A news story.
3 item	4. To look up to.
4 respect	5. A place of shelter.
	6. State of being joyous or fortunate.
	7. The act of giving what is wanted or expected.

---

(4)

6 canary	1. To look upon without pleasure.
5 weary	2. To blame.
4 gotten	3. Gained.
1 dislike	4. To take willingly.
2 accuse	5. Tired or worn out.
	6. A small, yellow songbird.
	7. Lacking strength.

Note: The definitions above were taken or adapted from Webster's Elementary Dictionary.

SPELLING EXPERIMENT

Words for Ninth Week

1. personal. Each boy has a chest for his personal belongings.
2. finally. Finally,the job was finished to his satisfaction.
3. equally. She divided the candy equally among the members of the group.
4. estate. His father is in the real estate business.
5. cultivate. You must cultivate your garden, if you wish it to be a success.
6. personality. She has an outstanding personality.
7. contest. The winner of the contest will receive a camera.
8. protest. The coach is going to protest the umpire's decision.
9. closing. The storekeeper said it was closing time.
10. beggar. A blind beggar came shuffling along holding out a tin cup.
11. inclosing . There was a barbed wire fence inclosing a large pasture.
12. grizzly. The grizzly bear inhabits western North America.
13. scholar. He studies hard and is a good scholar.
14. naughty. The little girl had been naughty, and so her mother would not let her play with the other children.
15. creamery. Butter and cheese are made at a creamery.
16. nevertheless. Nevertheless, he does not feel that he should go.
17. folks. Folks is another word for people.
18. prospect. There is a prospect of a large harvest.
19. regardless. Regardless of the late hour, they started a new game.
20. gradually. He is gradually learning to be a good pitcher.

WORD MEANING TEST FOR NINTH WEEK

(1)

___ personal	1. Evenly matched.
___ finally ~~scarcely~~	2. Property or belongings owned by a person.
___ equally ~~merchandise~~	3. In the end.
___ estate ~~advertising~~	4. Lately.
___ cultivate ~~elsewhere~~	5. Of or belonging to oneself.
	6. To increase in size.
	7. To help the growth of crops by working the land.

---

(2)

___ personality	1. To cover or to shield.
___ contest	2. That which makes one person different from another.
___ protest	3. A program.
___ closing	4. A competition for a prize.
___ beggar	5. A person who asks to be given money or food, etc.
	6. To object strongly.
	7. Stopping up or shutting.

---

(3)

___ inclosing	1. A place where milk and cream and their products are prepared for market.
___ grizzly	2. A container.
___ scholar	3. A student or a pupil.
___ naughty	4. Dark color mixed with gray.
___ creamery	5. Shutting in.
	6. Fierce.
	7. Not behaving well.

---

(4)

___ nevertheless	1. People.
___ folks	2. That which seems likely to happen.
___ prospect	3. Having no care for.
___ regardless	4. Without a doubt.
___ gradually	5. A great rush or hurry.
	6. Slowly.
	7. In spite of that.

Note: The definitions above were taken or adapted from Webster's Elementary Dictionary.

SPELLING EXPERIMENT

Words for Tenth Week

1. mental. He did some rapid mental arithmetic and got the right answer.
2. medal. She was given a medal for winning the swimming race.
3. previous. Miss Jackson said she had a provious appointment.
4. glorious. Wednesday was a glorious day.
5. confident. The baseball team is confident of winning the game.
6. constant. They are constant companions.
7. neglect. Do not neglect to do your homework.
8. institute. The Massachusetts Institute of Technology offers fine courses in engineering.
9. sermon. The minister preached a fine sermon on Sunday.
10. headquarters. To take care of the flood victims, the Red Cross set up headquarters in the schoolhouse.
11. neglected. He neglected to feed the chickens this morning.
12. institution. He works in an institution for the blind.
13. pardon. She asked our pardon for walking between us.
14. railway. The package wassent by railway express.
15. border. In order to cross the Canadian border, it is necessary to go through the customs.
16. article. He was reading an article on Mexico.
17. expert. She is an expert knitter.
18. policy. This insurance policy covers your property in case of fire.
19. appetite. Outdoor exercise in the winter gives one an especially hearty appetitc.
20. misunderstanding. The mix-up was caused by a misunderstanding.

WORD MEANING TEST FOR TENTH WEEK

(1)

___ mental
___ medal
___ previous
___ glorious
___ confident

1. Of great value.
2. Splendid or worthy of praise.
3. Sure or feeling certain.
4. The leading part in a song.
5. Earlier or former.
6. A coinlike piece of metal made to honor a special event, person or deed.
7. Having to do with the mind.

---

(2)

___ constant
___ neglect
___ institute
___ sermon
___ headquarters

1. To fail to attend to or to care for.
2. The place occupied by the leaders of a group.
3. A public speech giving religious teaching.
4. A business.
5. Unchanging or happening over and over again.
6. A school or a society which helps some field of learning.
7. To sail over.

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(3)

___ neglected
___ institution
___ pardon
___ railway
___ border

1. To excuse or to free from punishment.
2. Any line of metal bars making a runway for wheels.
3. A high, steep cliff.
4. One who has his meals in another's house.
5. Failed to attend to or to care for.
6. A society or a corporation formed for a special purpose.
7. The outer part or edge of anything.

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(4)

___ article
___ expert
___ policy
___ appetite
___ misunderstanding

1. The act of failing to get the meaning.
2. The greatest possible.
3. The written agreement between an insurance company and the person insured.
4. A desire for food.
5. Skillful or clever.
6. Being glad.
7. A piece in a newspaper or magazine about a certain subject.

Note: The definitions above were taken or adapted from Webster's Elementary Dictionary.

SPELLING EXPERIMENT

Words for Eleventh Week

1. desert. Why are camels useful on a desert?
2. concert. The high school orchestra is to give a concert on Friday.
3. favorable. The Boy Scouts are going on an over night hike next week-end, if the weather is favorable.
4. admission. We decided to charge fifty cents for admission to the play.
5. impression. They gave the impression of being in a great hurry.
6. favorably. The group voted favorably on the question of putting on an operetta.
7. expression. We could tell by his expression that he was notpleased.
8. moisture. A large tree takes a great deal of moisture from the ground.
9. culture. Culture should make people easier to live with.
10. adventure. Fred is going to tell us about his sailing adventure.
11. tact. Jim is noted for his tact.
12. safely. We crossed the river safely on the old raft.
13. carefully. We paddled the canoe carefully down the rocky stream.
14. respectfully. The boys spoke respectfully to the old gentleman.
15. contract. They have signed a contract to build the new school.
16. afford. The club cannot afford any new equipment just yet.
17. obliged. We shall be obliged to do it by ourselves, if you cannot help us.
18. surround. They plan to surround their back yard with a high board fence.
19. choosing. The captains are choosing sides for the game.
20. normal. The temperature is much colder than normal for this time of year.

WORD MEANING TEST FOR ELEVENTH WEEK

(1)

___ desert	1. The right to enter.
___ concert	2. Helpful; promising; showing approval.
___ favorable	3. A group that listens.
___ admission	4. The act of fixing one's mind closely upon something.
___ impression	5. A public musical recital.
	6. Dry wasteland, usually sandy.
	7. The effect which something has on one's mind.

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(2)

___ favorably	1. A way of speaking or of looking.
___ expression	2. Charmingly.
___ moisture	3. With liking or approval.
___ culture	4. The way in which things take place.
___ adventure	5. The result of careful training.
	6. A small amount of water which causes dampness.
	7. An experience which is full of risks or dangers.

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(3)

___ tact	1. With willingness to work with others.
___ safely	2. A riddle or a puzzling question.
___ carefully	3. An agreement, usually written.
___ respectfully	4. With high regard or favor.
___ contract	5. The ability to get along with other persons.
	6. With serious attention or watchfulness.
	7. Without injury or danger.

---

(4)

___ afford	1. Selecting or picking out what one wants.
___ obliged	2. To enclose on all sides.
___ surround	3. Forced.
___ choosing	4. Of the usual kind; natural.
___ normal	5. Lively.
	6. To cause a loss of liking or loyalty.
	7. To have money enough to buy.

Note: The definitions above were taken or adapted from Webster's Elementary Dictionary.

SPELLING EXPERIMENT

Words for Twelfth Week

1. arrival. We will wait for the arrival of the other boys before starting our hike.
2. disposal. They have a large underground receiver for the disposal of garbage.
3. illustrated. The book is illustrated with drawings by a well-known artist.
4. salesman. The salesman showed us many pairs of shoes.
5. chairman. We made Betty chairman of the committee for the play.
6. illustrating. Here is a picture illustrating the story we have just read.
7. voyage. It is a book about a voyage in a sailing vessel.
8. garbage. It is Ben's turn to empty the garbage.
9. village. The little white church was in the center of the village.
10. upset. The baby had upset his bowl of cereal.
11. illustration. This is an illustration of gold mining in Alaska.
12. ghost. He told us a story of a ghost in a descrted house.
13. honestly. I cannot honestly say that I enjoyed that movie.
14. argument. They are having an argument about whose turn comes next.
15. management. The management of the baseball team has been put in John's hands.
16. additional. Here are some additional stamps for your collection.
17. record. She bought a new record for their phonograph.
18. prevent. Carefulness can prevent accidents.
19. former. We are going back next summer to visit our former neighbors.
20. forenoon. We are going to start in the forenoon and take our lunch.

WORD MEANING TEST FOR TWELFTH WEEK

(1)

___ arrival	1. A person who sells.
___ disposal	2. A putting in place.
___ illustrated	3. An officer who leads a meeting.
___ salesman	4. A person who fights for another person.
___ chairman	5. Supplied or decorated with pictures.
	6. The act of defying or daring.
	7. The act of coming.

---

(2)

___ illustrating	1. A journey, especially by water.
___ voyage	2. Waste food matter.
___ garbage	3. To tip over.
___ village	4. A small town.
___ upset	5. Amount of space taken.
	6. Supplying or decorating with pictures.
	7. To go before.

---

(3)

___ illustration	1. A course of action.
___ ghost	2. A picture used to explain or to decorate a book, etc.
___ honestly	3. Fairly and without deceit.
___ argument	4. A talk in which reasons for or against a thing are given.
___ management	5. The act of directing the affairs of.
	6. A person or thing used in place of another.
	7. The spirit of a dead person thought of as appearing in bodily form to living persons.

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(4)

___ additional	1. To keep from doing or to stop.
___ record	2. Of the regular kind.
___ prevent	3. More.
___ former	4. The part of the day from sunrise until the middle of the day.
___ forenoon	5. A pet cure.
	6. Going before in time.
	7. A hard rubber disc from which music or other sounds can be played on a phonograph.

Note: The definitions above were taken or adapted from Webster's Elementary Dictionary.

SPELLING EXPERIMENT

Words for Thirteenth Week

1. plus. Two plus three is five.
2. internal. She has internal injuries as a result of her fall.
3. international. Five countries signed an international agreement to prevent war.
4. literary. They call it the "Literary Club" because they talk about books at their meetings.
5. position. A natural and relaxed position is necessary for good penmanship.
6. surplus. We returned the surplus paper so that it could be used later.
7. national. The Star Spangled Banner is our national anthem.
8. literature. Reading really good literature is a pleasant occupation.
9. composition. We are writing a composition about our trip.
10. compelled. Hi s mother compelled him to stay at home, because he had been sick.
11. canned. We had canned peaches for dessert.
12. association. They have formed an association to raise money for a new playground.
13. listed. You will find his name listed in the telephone directory.
14. disgusted. That movie was so poor that we were disgusted.
15. federation. Their mother has gone to a meeting of the State Federation of Women's Clubs.
16. hustling. They are hustling to get ready for the bus.
17. particular. She is very particular about her appearance.
18. excursion. They have taken their lunch and gone on an excursion.
19. mosquito. The mosquito is a very annoying insect.
20. imagine. On a dark and windy night, it is sometimes easy to imagine that one hears strange noises.

WORD MEANING TEST FOR THIRTEENTH WEEK

(1)

___ plus
___ internal
___ international
___ literary
___ position

1. Between countries.
2. More than enough.
3. The place where a person or thing is.
4. Having to do with the study or writing of books, etc.
5. Inner or inside.
6. Higher than.
7. With the addition of.

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(2)

___ surplus
___ national
___ literature
___ composition
___ compelled

1. A mixture used to make better soil.
2. Forced.
3. An amount left over.
4. Of a country.
5. Something written to gain practice in writing.
6. The written and printed productions of a country, etc.
7. To put into a new form.

---

(3)

___ canned
___ association
___ listed
___ disgusted
___ federation

1. Made to feel great dislike.
2. Happiness.
3. Kept from spoiling in sealed jars, etc.
4. A group of persons having a common purpose or interest.
5. Entered in a record of names or items, etc.
6. Made believe.
7. A joining together of clubs or societies, etc.

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(4)

___ hustling
___ particular
___ excursion
___ mosquito
___ imagine

1. To form a picture in one's mind.
2. A trip made chiefly for pleasure.
3. A lazy person.
4. Moving or working quickly.
5. A small insect, the female of which sucks the blood of people and animals.
6. To dislike greatly.
7. Special; or giving attention to small details.

Note: The definitions above were taken or adapted from Webster's Elementary Dictionary.

SPELLING EXPERIMENT

Words for Fourteenth Week

1. recall. Do you recall the day when we had the picnic down by the pond?
2. install. They are going to install a new pump.
3. profession. He plans to study for the teaching profession.
4. possession. They took possession of the house yesterday.
5. mount. One should always mount a horse from the left side.
6. amounting. They have money amounting to four hundred dollars toward the new cabin.
7. forwarded. Their mail was forwarded to them in Florida.
8. issue. Have you seen the April issue of the new magazine?
9. government. The seat of government for the Commonwealth of Massachusetts is at Boston.
10. energy. Sawing wood by hand takes a lot of energy.
11. forwarding. I am forwarding this mail to their new address.
12. issued. We have just issued a new number of the school magazine.
13. departments. A store like Filene's has many different departments.
14. improving. He is still in the hospital, but his condition is improving every day.
15. accept. Are you going to accept his offer?
16. pamphlet. He sent us a pamphlet which has pictures of the hotel where they are staying.
17. theater. We are going to the theater to see a new play.
18. millionaire. A man who has a million dollars is called a millionaire.
19. courtesy. Courtesy is the result of thoughtfulness.
20. stomach. Those green apples will give you a stomach ache.

WORD MEANING TEST FOR FOURTEENTH WEEK

(1)

___ recall	1. To get up on something.
	2. The act of telling about something.
___ install	3. To set up for use.
	4. To change the place of.
___ profession	5. A job for which special education is necessary.
	6. To remember; to ask to return.
___ possession	7. Something which is held as one's own property.
___ mount	

---

(2)

___ amounting	1. Fully occupied.
	2. Direction of the affairs of a city, a nation, etc.
___ forwarded	3. A thing that is sent out or delivered.
	4. Natural power; force of action.
___ issue	5. Strong feeling for a cause.
	6. To come to as a total or whole.
___ government	7. Sent on or ahead.
___ energy	

---

(3)

___ forwarding	1. Becoming better.
	2. Divisions of a business house.
___ issued	3. To speak first to.
	4. Sending on or ahead.
___ departments	5. Printed and circulated or sent out.
	6. Making a report.
___ improving	7. To take willingly something that is offered.
___ accept	

---

(4)

___ pamphlet	1. A building in which plays or motion pictures are presented.
___ theater	2. The act of being thoughtful of other people.
___ millionaire	3. The organ into which food goes after it has left the mouth and passed down the throat.
	4. A stump or block of wood.
___ courtesy	5. A person who has a million dollars or more.
	6. A long, narrow, ribbonlike flag.
___ stomach	7. A few printed sheets bound together.

Note: The definitions above were taken or adapted from Webster's Elementary Dictionary.

SPELLING EXPERIMENT

Words for Fifteenth Week

1. estimate. He is going to estimate the cost of putting in a new heating system.
2. precious. Diamonds and rubies are called precious stones.
3. delicious. Mother made us some delicious cup cakes.
4. system. Her sickness has affected her whole system.
5. mystery. He has hired a detective to try to solve the mystery.
6. estimated. He estimated that it would cost a thousand dollars to build a new garage.
7. service. We are going to the early service at the church on Easter.
8. within. They will be back within an hour.
9. withdraw. The allies were going to withdraw their troops from the valley.
10. evil. We must try to return good for evil.
11. services. There will be two services at our church on Easter.
12. reckon. Let's reckon the days till vacation.
13. wisdom. He showed a lot of wisdom for a small boy.
14. counter. She laid the groceries on the counter.
15. imprison. They are going to imprison the bobbers.
16. virtue. "Patience is a virtue."
17. sought. They sought everywhere trying to find the missing flyer.
18. highway. The new highway is going through Lynnfield.
19. interview. Several newspaper reporters have asked him for an interview.
20. offend. It will offend her if we do not go.

WORD MEANING TEST FOR FIFTEENTH WEEK

(1)

___ estimate	1. Very pleasing to the taste.
___ precious	2. Of great value.
___ delicious	3. Having to do with music.
___ system	4. A deep secret.
___ mystery	5. The nose and jaws of an animal.
	6. A group of units so put together as to make a working whole.
	7. To roughly reckon the value, size or cost, etc.

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(2)

___ estimated	1. To act of helping or of obeying or worshipping.
___ service	2. On the inside.
___ within	3. To take away from; to remove.
___ withdraw	4. The act of holding as one's own.
___ evil	5. Wrongdoing; wickedness.
	6. Roughly reckoned the value, size or cost, etc.
	7. Broke into.

---

(3)

___ services	1. To count.
___ reckon	2. The result of something that has happened.
___ wisdom	3. Acts of helping or of obeying or worshipping.
___ counter	4. Knowledge and the ability to use it.
___ imprison	5. A long, narrow table or shelf in a store on which goods are handled.
	6. To listen secretly.
	7. To put in jail.

---

(4)

___ virtue	1. Tried to find something.
___ sought	2. A main road.
___ highway	3. A meeting to talk with someone.
___ interview	4. To do something in turn.
___ offend	5. Goodness.
	6. To cause anger, dislike, etc.
	7. The act of asking.

Note: The definitions above were taken or adapted from Webster's Elementary Dictionary.

SPELLING EXPERIMENT

Words for Sixteenth Week

1. automatic. Mr. Smith was hunting with an automatic rifle.
2. domestic. Girls often study domestic science in Junior High School.
3. vicinity. Palm trees do not grow in this vicinity.
4. majority. In a democracy, the majority rules.
5. horrible. War is horrible.
6. terrible. The earthquake caused terrible destruction.
7. obey. All good drivers obey traffic laws.
8. apartment. They are living in a five room apartment.
9. instrument. The doctor had to use an instrument to remove the splinter.
10. alter. She is going to alter David's suit to make it fit John.
11. obedient. A well-trained dog is obedient.
12. ancient. They are studying ancient history.
13. memory. A good memory is a great help in school work.
14. Easter. Easter came late this year.
15. magic. Magic tricks can all be explained.
16. maintain. He maintains a correspondence with a boy in France.
17. photograph. That is a good photograph of Martha.
18. forever. Nothing lasts forever.
19. summon. We cannot move this car unless we summon help.
20. sketch. Jane is drawing a sketch of the view from her window.

WORD MEANING TEST FOR SIXTEENTH WEEK

(1)

___ automatic
___ domestic
___ vicinity
___ majority
___ horrible

1. Terrible.
2. The line where the earth seems to meet the sky.
3. A number greater than half of a total.
4. Nearness.
5. Having to do with a home.
6. Self-acting or self-regulating.
7. Noble.

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(2)

___ terrible
___ obey
___ apartment
___ instrument
___ alter

1. To change partly.
2. To make right.
3. Fearful.
4. To carry out the orders of someone.
5. A tool.
6. Something done to make up for a loss.
7. A set of rooms used to live in.

---

(3)

___ obedient
___ ancient
___ memory
___ Easter
___ magic

1. Belonging to times long past.
2. Willing to mind.
3. The part which is left over.
4. Having to do with seemingly secret forces.
5. Full of deep feeling.
6. The Sunday when we rejoice in Jesus' victory over death.
7. The action of bringing anything back to mind.

---

(4)

___ maintain
___ photograph
___ forever
___ summon
___ sketch

1. A drawing.
2. To feed animals with grass.
3. To carry on.
4. A picture taken with a camera.
5. To send for.
6. A long wooden or metal pin.
7. At all times.

Note: The definitions above were taken or adapted from Webster's Elementary Dictionary.

RESULTS OF TESTS - FIRST WEEK

41 Pupils 820 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. dealer	25		14	2
2. dealing	27	1	13	
3. render	14	20	1	6
4. rendered	10	23	4	4
5. coax	6		27	8
6. loan	27		12	2
7. adjust	24		15	2
8. adjusted	24	1	14	2
9. extent	11	11	6	13
10. extended	12		24	5
11. decide	9		24	8
12. event	25	10	2	4
13. timber	27	2	11	1
14. wound	20	3	11	7
15. simply	24	4	8	5
16. ruin	25	2	10	4
17. tobacco	9	1	28	3
18. avail	5	10	8	18
19. utmost	6	12	4	19
20. latter	11	12	2	16
TOTALS	341	112	238	129

RESULTS OF TESTS - SECOND WEEK

43 Pupils 860 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. rural	4	8	8	23
2. royal	20		16	7
3. sense	5	1	26	11
4. hereby	20	9	9	5
5. perceive		1	8	34
6. nonsense	5		36	2
7. herein	19	11	6	7
8. persuade	3	1	24	15
9. trousers	16		21	6
10. haste	25	2	10	6
11. herewith	20	12	6	5
12. surface	7	12	7	17
13. hinge	24	3	14	2
14. based	25	3	11	4
15. style	24		11	8
16. hereafter	26	4	9	4
17. tennis	17	1	22	3
18. duly	3	5	8	27
19. portion	14	2	13	14
20. joint	20	7	15	1
TOTALS	297	82	280	201

RESULTS OF TESTS - THIRD WEEK

44 Pupils 880 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. acquaint			38	6
2. fortunate	11		30	3
3. stretch	14		27	3
4. delivery	25	2	14	3
5. crotch	6	1	26	11
6. acquainted	2		32	10
7. unfortunate	11		30	3
8. deliveries	17	2	21	4
9. attitude	6	1	21	16
10. gratitude	2	2	27	13
11. approach	2	7	18	17
12. pretend	27		15	2
13. appeared	20		20	4
14. announce	17	2	20	5
15. invoice	9	16	4	15
16. depot	22	1	18	3
17. banquet	7	1	30	6
18. commerce	4	6	8	26
19. lettuce	14		24	6
20. register	10	3	22	9
TOTALS	226	44	445	165

RESULTS OF TESTS - FOURTH WEEK

42 pupils 840 Pairs of Testing

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. operate	24		17	1
2. whereby	19	2	13	8
3. custom	15	4	13	10
4. suitable	15	4	16	7
5. reliable	14	3	17	8
6. operating	18		24	
7. wherever	24	1	13	4
8. customer	20		20	2
9. payable	25	3	10	4
10. cartoon	18	4	10	10
11. operation	22	2	15	3
12. lawyer	18		22	2
13. volume	10	6	15	11
14. mind	29	2	7	4
15. ware	15	8	8	11
16. some one or someone	37		5	
17. bundle	19	6	11	6
18. British	17	3	19	3
19. respond	21	7	9	5
20. drawer	18		19	5
TOTALS	398	55	283	104

RESULTS OF TESTS - FIFTH WEEK

40 pupils 800 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. alley	25		15	
2. trolley	15		24	1
3. consent	26	9	3	2
4. present	26	2	10	2
5. locate	23	4	10	3
6. located	23	3	13	1
7. experience	10	3	15	12
8. confidence	11	4	14	11
9. applicant	2		26	12
10. trial	18	1	15	6
11. application	3	1	22	14
12. ideal	17	9	4	10
13. quality	3	6	10	21
14. difficult	4	3	21	12
15. umpire	17	2	15	6
16. period	18	1	11	10
17. uniform	15	2	17	6
18. maybe	19	4	10	7
19. influence	8	5	12	15
20. swinging	21	3	10	6
TOTALS	304	62	277	157

RESULTS OF TESTS - SIXTH WEEK

45 Pupils 900 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. election	33		12	
2. objection	30	2	11	2
3. actual	12	1	30	2
4. annual	5		26	14
5. manual	12	11	10	12
6. democrat	10	3	23	9
7. democratic	14	3	21	7
8. senior	18	8	13	6
9. junior	12	3	19	11
10. behavior	8		31	6
11. faculty	6	4	11	24
12. initial	7		27	11
13. hospital	29	1	15	
14. foundation	13	7	16	9
15. thunder	26	3	15	1
16. concern	7	4	18	16
17. barked	35	1	9	
18. carload	35	3	7	
19. partner	18	3	20	4
20. glance	32	3	9	1
TOTALS	362	60	343	135

RESULTS OF TESTS - SEVENTH WEEK

46 Pupils 920 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. resign	22	4	15	5
2. likewise	21	12	4	9
3. otherwise	21	10	8	7
4. oppose	9	2	13	22
5. dispose	23	9	5	9
6. resigned	21	6	15	4
7. disposed	25	7	9	5
8. volunteer	2		37	7
9. engineer	24		21	1
10. declaration	14	5	12	15
11. engineering	8	16	7	15
12. presume	11	2	15	18
13. prevail	12	13	1	20
14. moral	5	9	10	22
15. olives	33	2	5	6
16. handful	24	2	14	6
17. meadow	17	11	10	8
18. odor	17	3	20	6
19. samples	25	5	8	8
20. conversation	20	4	15	7
TOTALS	354	122	244	200

RESULTS OF TESTS - EIGHTH WEEK

49 Pupils 980 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. scarce	15	7	16	11
2. scarcely	9	4	20	16
3. merchandise	4		35	10
4. advertising	11		27	11
5. elsewhere	11		34	4
6. everywhere	14	6	19	10
7. satisfactory	14	5	18	12
8. settled	31	6	8	4
9. effect	11	4	21	13
10. throughout	9	10	15	15
11. satisfaction	28	2	13	6
12. settlement	26	2	16	5
13. happiness	11	4	28	6
14. item	13	27	2	7
15. respect	31	6	5	7
16. canary	22	1	21	5
17. weary	17	8	15	9
18. gotten	14	17	7	11
19. dislike	33	10	4	2
20. accuse	16	1	22	10
TOTALS	340	120	346	174

RESULTS OF TESTS - NINTH WEEK

41 Pupils 820 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. personal	18	5	13	5
2. finally	21	3	11	6
3. equally	15	2	17	7
4. estate	21	6	10	4
5. cultivate	12		25	4
6. personality	12	1	18	10
7. contest	32	5	3	1
8. protest	22	12	5	2
9. closing	26	4	10	1
10. beggar	17	1	21	2
11. inclosing	30	5	5	1
12. grizzly	3	12	1	25
13. scholar	5		32	4
14. naughty	15		21	5
15. creamery	28	1	9	3
16. nevertheless	8	23	3	7
17. folks	30		10	1
18. prospect	9	20	2	10
19. regardless	5	16	3	17
20. gradually	9	4	20	8
TOTALS	338	120	239	123

RESULTS OF TESTS - TENTH WEEK

41 Pupils 820 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. mental	14	4	15	8
2. medal	18	3	17	3
3. previous	14	1	16	10
4. glorious	14	1	19	7
5. confident	11	3	20	7
6. constant	19	2	10	10
7. neglect	23		12	6
8. institute	6		20	15
9. sermon	15	1	15	10
10. headquarters	13	2	23	3
11. neglected	23	1	9	8
12. institution	7		21	13
13. pardon	25	1	8	7
14. railway	35	1	3	2
15. border	12	2	18	9
16. article	5		29	7
17. expert	24	11	2	4
18. policy	13	1	18	9
19. appetite	5		29	7
20. misunderstanding	15	4	15	7
TOTALS	311	38	319	152

RESULTS OF TESTS - ELEVENTH WEEK

44 Pupils 880 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. desert	36		7	1
2. concert	11		29	4
3. favorable	14	3	21	6
4. admission	13	4	23	4
5. impression	7	6	13	18
6. favorably	12	1	16	15
7. expression	16		21	7
8. moisture	14	1	23	6
9. culture	8	10	10	16
10. adventure	28	3	13	
11. tact	5	16	1	22
12. safely	25	1	13	5
13. carefully	23	10	7	4
14. respectfully	14	11	5	14
15. contract	24	5	5	10
16. afford	24	4	11	5
17. obliged	5	19	4	16
18. surround	12	3	22	7
19. choosing	8		25	11
20. normal	15	7	12	10
TOTALS	314	104	281	181

RESULTS OF TESTS - TWELFTH WEEK

44 Pupils 880 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. arrival	14		26	4
2. disposal	7	3	15	19
3. illustrated	7		28	9
4. salesman	26	1	16	1
5. chairman	30	5	6	3
6. illustrating	9		31	4
7. voyage	23	1	18	2
8. garbage	18	1	25	
9. village	37		6	1
10. upset	37	1	5	1
11. illustration	6	1	29	8
12. ghost	16	2	22	4
13. honestly	17	3	15	9
14. argument	23	4	11	6
15. management	11	5	11	17
16. additional	9		14	21
17. record	25	5	11	3
18. prevent	29	8	5	2
19. former	8	19	1	16
20. forenoon	25	5	11	3
TOTALS	377	64	306	133

RESULTS OF TESTS - THIRTEENTH WEEK

44 Pupils 880 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. plus	31	3	9	1
2. internal	12	9	10	13
3. international	19	8	10	7
4. literary	14	2	18	10
5. position	19	6	8	11
6. surplus	16	6	12	10
7. national	21	11	5	7
8. literature	3	4	14	23
9. composition	14	12	5	13
10. compelled	9	5	10	20
11. canned	22	1	15	6
12. association	5	4	17	18
13. listed	35	8	1	
14. disgusted	15	3	18	8
15. federation	14	10	4	16
16. hustling	18	2	18	6
17. particular	10		25	9
18. excursion	4	2	18	20
19. mosquito	5		35	4
20. imagine	12		22	10
TOTALS	298	96	274	212

RESULTS OF TESTS - FOURTEENTH WEEK

44 Pupils 880 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. recall	30	7	7	
2. install	26	7	8	3
3. profession	11		21	12
4. possession	3		23	18
5. mount	33	5	2	4
6. amounting	22	14	6	2
7. forwarded	17	7	11	9
8. issue	11	8	14	11
9. government	24	4	10	6
10. energy	12	9	12	11
11. forwarding	21	6	11	6
12. issued	16	4	10	14
13. departments	29	6	4	5
14. improving	20	3	16	5
15. accept	19	2	14	9
16. pamphlet	7	2	25	10
17. theater	21	4	15	4
18. millionaire			39	5
19. courtesy	4		26	14
20. stomach	6		34	4
TOTALS	332	88	308	152

RESULTS OF TESTS - FIFTEENTH WEEK

42 Pupils 840 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. estimate	16	2	20	4
2. precious	10		26	6
3. delicious	13		26	3
4. system	19	5	13	5
5. mystery	15		21	6
6. estimated	17	1	19	5
7. service	24	4	10	4
8. within	31	5	1	5
9. withdraw	26	5	9	2
10. evil	23	6	9	4
11. services	19	5	13	5
12. reckon	6	12	3	21
13. wisdom	17	8	10	7
14. counter	27	7	6	2
15. imprison	16	2	17	7
16. virtue	3		16	23
17. sought	19	6	10	7
18. highway	34	4	3	1
19. interview	12	11	9	10
20. offend	15	8	9	10
TOTALS	362	91	250	137

RESULTS OF TESTS - SIXTEENTH WEEK

45 Pupils 900 Pairs of Testings

	Spelling Correct Meaning Correct	Spelling Correct Meaning Incorrect	Spelling Incorrect Meaning Correct	Spelling Incorrect Meaning Incorrect
1. automatic	19	1	20	5
2. domestic	14	10	3	18
3. vicinity	15	19	5	6
4. majority	8	1	20	16
5. horrible	13		29	3
6. terrible	24	3	16	2
7. obey	26	4	13	2
8. apartment	27	2	14	2
9. instrument	20		19	6
10. alter	14	13	9	9
11. obedient	27	1	14	3
12. ancient	16	3	19	7
13. memory	13	3	22	7
14. Easter	22	3	19	1
15. magic	23	5	12	5
16. maintain	14	9	9	13
17. photograph	13	2	27	3
18. forever	27	12	1	5
19. summon	10	3	17	15
20. sketch	14	1	27	3
TOTALS	359	95	315	131

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